

Reporting Year 2007

20 40 60 80 100 120 140

EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (EPCRA) Section 313

EPA

Toxics Release Inventory Reporting Requirements

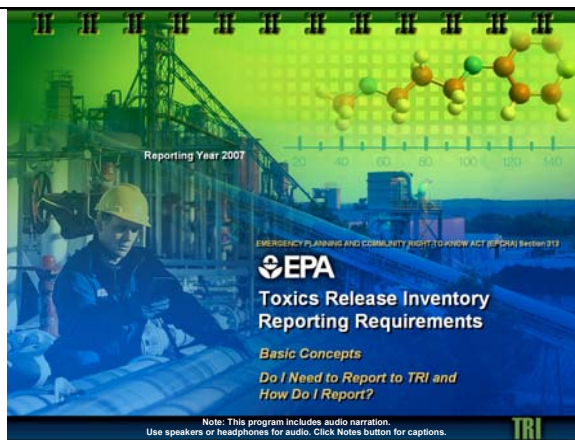
Basic Concepts

*Do I Need to Report to TRI and
How Do I Report?*

Note: This program includes audio narration.
Use speakers or headphones for audio. Click Notes button for captions.

TRI

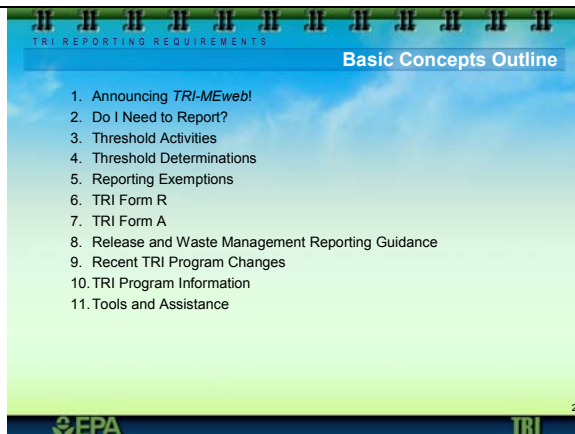
Slide 1
Welcome Screen
Duration: 00:00:49



Notes:

Welcome to the Emergency Planning and Community Right-to-Know Act, Section 313, Toxics Release Inventory online training for the 2007 reporting year. This is the Basic Concepts Module of a two part training course that is made up of this module and an Advanced Concepts module. The Basic Concepts module will walk you through the process of determining whether or not your facility is required to report to the Toxics Release Inventory, or TRI, and if so, how you actually prepare and submit information to TRI. The Advanced Concepts module assumes a basic understanding of the TRI requirements and focuses on key concepts that will help to ensure accurate TRI reporting.

Slide 2
Basic Concepts Outline
Duration: 00:01:06



Notes:

In this module we'll first introduce a new TRI reporting tool – TRI-ME web – that is the next generation of TRI Made Easy reporting software. We'll also provide a brief overview of the TRI program and help you determine whether or not your facility is covered by TRI. We'll look at the TRI chemical list, and we'll help you determine whether or not your facility exceeded any of the activity thresholds for these chemicals, which would trigger TRI reporting.

Next, we'll cover a number of exemptions to TRI reporting that might apply to your facility, and we will look at the Form R and Form A, which are the two reporting options under TRI. Then, we will provide some guidance aimed at ensuring accurate reporting. Finally, we'll cover recent changes and other key information related to the TRI program and how you can get additional information and assistance with TRI requirements.

Slide 3

Section I: Announcing TRI-MEweb!

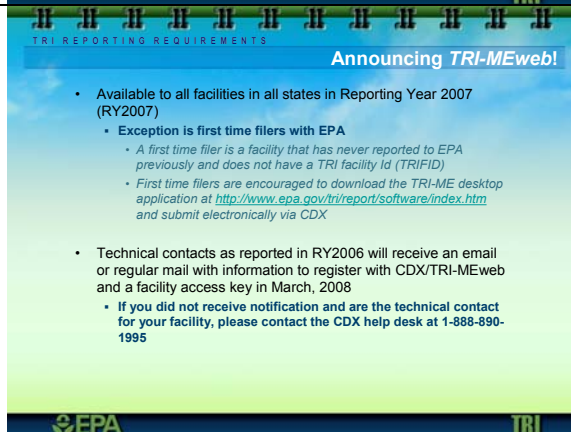
Duration: 00:00:05



Slide 4

Announcing TRI-MEweb!

Duration: 00:00:59



Notes:

TRI-ME web is the next generation of software for completing and submitting TRI forms. TRI-ME web is now available to all facilities for reporting year 2007 provided your facility has filed to TRI in the past and has a TRI facility ID. If your facility is reporting to TRI for the first time, you are encouraged to download and use the TRI-ME desktop application available from the website shown here.

Facilities need a facility access key to register for TRI-ME web and submit their reports via the Central Data Exchange, or CDX. Access keys were sent to TRI technical contacts via email and regular mail in March of this year. If you did not receive an access key for your facility, contact the CDX help desk at the toll free number shown here.

Slide 5

Important Notice on TRI-MEweb!

Duration: 00:00:55

Important Notice on TRI-MEweb!

- *TRI-MEweb* requires certifiers to register with the Central Data Exchange (CDX) prior to being able to certify *TRI-MEweb* forms
 - Registration includes creating, signing, and sending an electronic signature agreement (ESA) to the TRI data processing center
 - This process is estimated to take a minimum of 5 business days
 - Submission of the ESA is one time only as long as the certifier represents the facility
- The TRI program recommends that facilities using *TRI-MEweb* register their certifier immediately upon accessing the application
- For more information about *TRI-MEweb* and *TRI-MEdesktop*, please visit <http://www.epa.gov/tri/report/software/index.htm>

EPA TRI

Notes:

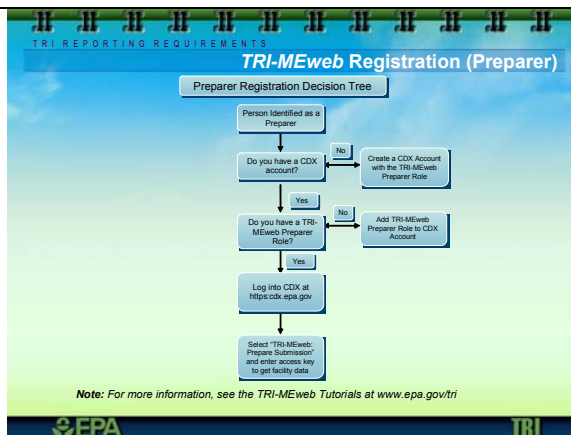
Certifiers of TRI forms submitted via TRI-ME web must first register with EPA's Central Data Exchange. Registration includes creating, signing, and mailing and electronic signature agreement, or ESA, to the TRI data processing center. Facilities should identify their certifiers and complete the registration process as soon as possible because this process will take at least 5 business days. Note that the submittal of an ESA is a new requirement beginning this year, but it only needs to be done once, as long as the certifier represents the facility.

For more information about the TRI-ME web or the TRI-ME desktop application, including web-based tutorials, visit the TRI website shown here.

Slide 6

TRI-MEweb Registration (Preparer)

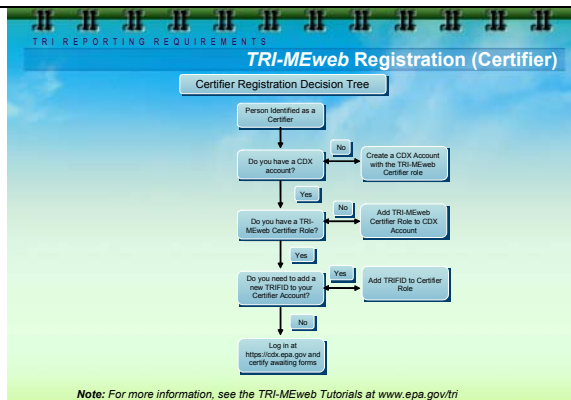
Duration: 00:00:26



Notes:

Those wishing to use TRI-ME web to prepare and submit their TRI submissions must have BOTH an account with EPA's Central Data Exchange AND have added the TRI-ME web preparer role to their CDX account. This decision tree can help you determine which of these requirements apply to you and ensure that you will be able to access your facility data in TRI-ME web.

Slide 7
**TRI-MEweb
 Registration (Certifier)**
 Duration: 00:00:39



Notes:

Those certifying TRI forms submitted via TRI-ME web must also have BOTH a CDX account and have added the TRI-ME web certifier role to their CDX account. Again, this decision tree can help you identify and complete the necessary steps needed to log into the CDX and certify awaiting forms.

Note that there is more assistance available for preparers and certifiers using TRI-ME web at the EPA TRI program homepage at www.epa.gov/tri.

Slide 8
**Section II: What is TRI
 – EPCRA 313?**
 Duration: 00:00:05



Slide 9
**What is EPCRA Section
 313 & TRI?**
 Duration: 00:00:51

What is EPCRA Section 313 & TRI?

- Section 313 of EPCRA requires facilities to file a TRI report for each Section 313 chemical exceeding an activity threshold (manufacturing, processing or otherwise using)
- Submit TRI reports to U.S. EPA, and either
 - designated state officials, or
 - designated tribal office
by July 1st for preceding calendar year's activities (aka Reporting Year (RY))
 [e.g. July 1, 2008 deadline for RY 2007 (January 1 - December 31, 2007) activities]

Notes:

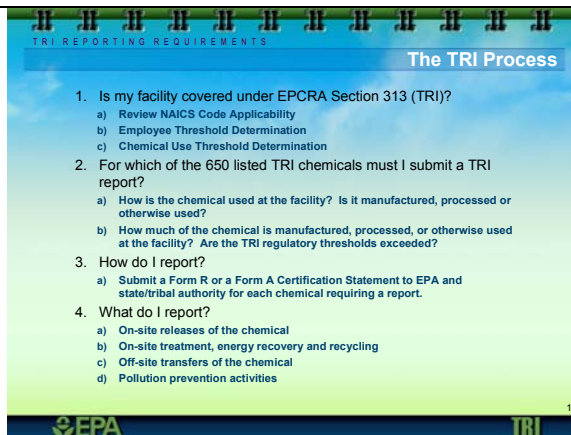
Now let's look at the basic requirements of Toxic Release Inventory reporting. What is TRI? The Toxic Release Inventory was established by Section 313 of the Emergency Planning and Community Right to Know Act, or EPCRA 313. Facilities that are covered under EPCRA 313 must complete a TRI chemical form for each TRI chemical for which they've exceeded an activity threshold. TRI reports must be sent to the United States EPA and your designated state or tribal authority.

These reports are due by July 1st for the preceding calendar year's activities. So for the calendar year of 2007, TRI reports are due by July 1st of 2008.

Slide 10

The TRI Process

Duration: 00:02:10



The TRI Process

1. Is my facility covered under EPCRA Section 313 (TRI)?
 - a) Review NAICS Code Applicability
 - b) Employee Threshold Determination
 - c) Chemical Use Threshold Determination
2. For which of the 650 listed TRI chemicals must I submit a TRI report?
 - a) How is the chemical used at the facility? Is it manufactured, processed or otherwise used?
 - b) How much of the chemical is manufactured, processed, or otherwise used at the facility? Are the TRI regulatory thresholds exceeded?
3. How do I report?
 - a) Submit a Form R or a Form A Certification Statement to EPA and state/tribal authority for each chemical requiring a report.
4. What do I report?
 - a) On-site releases of the chemical
 - b) On-site treatment, energy recovery and recycling
 - c) Off-site transfers of the chemical
 - d) Pollution prevention activities

EPA TRI 10

Notes:

A stepwise process can be used to determine if and what you would need to report to TRI. The first step is determining whether or not your facility is covered under EPCRA Section 313 and would, therefore, need to consider its toxic chemicals for TRI reporting. Whether or not your facility is covered is based on the types of activities carried out at the facility and the number of employees working for your facility. NAICS is the North American Industrial Classification System, which assigns numeric codes to characterize the activity taking place at the facility. We will talk more about the NAICS codes requirement shortly.

The next step is to determine for which TRI chemicals you must submit a TRI report. Covered facilities need to look at the TRI chemicals that are on the list and that may be present at the facility. Next, facilities need to look at how the chemicals are used. Are they manufactured? Processed? Or otherwise used? These are the TRI threshold activities. We will be describing each of these in more detail.

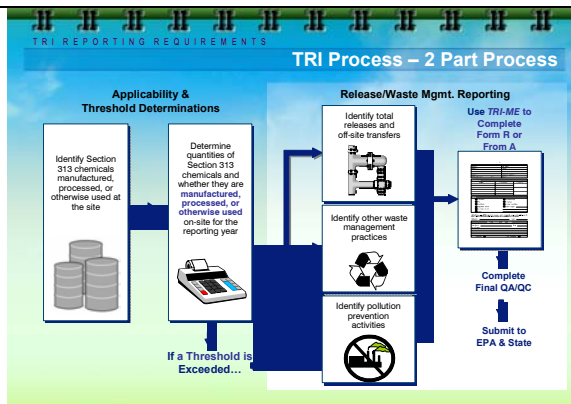
Next, facilities must calculate the quantity of the TRI chemical that is manufactured, processed, or otherwise used, and compare those quantities to the TRI activity thresholds. Only when activity thresholds are exceeded would the facility be required to complete and submit a TRI report, either a Form R or a Form A.

What information do facilities report to TRI? For the Form R, which is the more common means of TRI reporting, facilities report on how the TRI chemical is managed as waste, including onsite releases, treatment, energy recovery, recycling of the TRI chemical and offsite transfers, and pollution prevention activities that are conducted at the facility for that chemical.

Slide 11

TRI Process – 2 Part Process

Duration: 00:00:35



Notes:

Complying with the TRI requirements can be looked at as a two part process. The first part, shown on the left, involves determining if your facility is required to report to TRI, and if so, for which chemicals you would need to submit a report. The second part, shown on the right, is the actual release and waste management reporting. This is the information that you would put on a TRI form.

We will be covering both parts of the process in this Basic Concepts module.

Slide 12

Section III: Who Must Report?

Duration: 00:00:05



Slide 13

Who Must Report?

Duration: 00:01:11

The slide is titled "Who Must Report?". It contains two main bullet points:

- **Facility Level Determination**
 - Facilities (Private- and Public-sector)
 - In covered primary NAICS code(s) or Federal facilities; and
 - Meeting the employee threshold; and
- **Chemical by Chemical Determination**
 - That also exceed manufacture, and/or process, and/or otherwise use thresholds for each Section 313 chemical

Logos for EPA and TRI are at the bottom.

Notes:

Let's look in more detail at who must report to TRI. TRI reporting is done at the facility-level. Facilities must determine whether they need to report to TRI and, if so, facilities complete and submit the proper forms. Covered facilities can either be in the private or public sector. For private sector facilities, only facilities with certain primary North American Industrial Classification System codes are required to report. For public sector facilities, federal facilities owned or operated by the Executive Branch Agencies are covered regardless of their NAICS code.

Slide 13 - Continued Who Must Report?

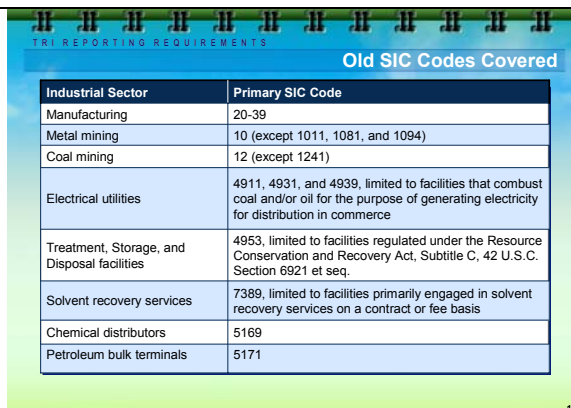
Duration: 00:01:11

Notes:

Facilities, both private and public sector, must have at least 10 full-time employees to be covered under TRI. Coming up, we'll talk about each of these requirements in more detail. Again, for those facilities that are covered by TRI, only those that have exceeded either manufacturing, processing, or otherwise use thresholds for TRI chemicals will be required to report.

Slide 14 Old SIC Codes Covered

Duration: 00:00:38



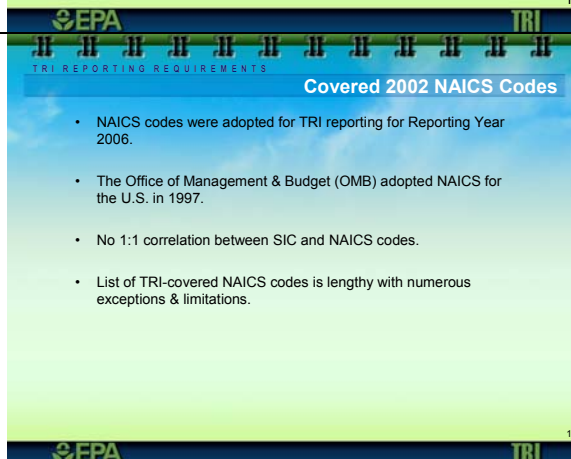
Industrial Sector	Primary SIC Code
Manufacturing	20-39
Metal mining	10 (except 1011, 1081, and 1094)
Coal mining	12 (except 1241)
Electrical utilities	4911, 4931, and 4939, limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce
Treatment, Storage, and Disposal facilities	4953, limited to facilities regulated under the Resource Conservation and Recovery Act, Subtitle C, 42 U.S.C. Section 6921 et seq.
Solvent recovery services	7389, limited to facilities primarily engaged in solvent recovery services on a contract or fee basis
Chemical distributors	5169
Petroleum bulk terminals	5171

Notes:

This table of SIC codes shows the private sector industries that are covered by TRI. Prior to reporting year 2006, industries covered by TRI defined by their primary Standard Industrial Classification codes. The covered sectors include: manufacturing; portions of metal mining; portions of coal mining; certain electric utilities; treatment, storage, and disposal facilities; solvent recovery facilities chemical distributors; and petroleum bulk terminals.

Slide 15 Covered 2002 NAICS Codes

Duration: 00:00:46



- NAICS codes were adopted for TRI reporting for Reporting Year 2006.
- The Office of Management & Budget (OMB) adopted NAICS for the U.S. in 1997.
- No 1:1 correlation between SIC and NAICS codes.
- List of TRI-covered NAICS codes is lengthy with numerous exceptions & limitations.

Notes:

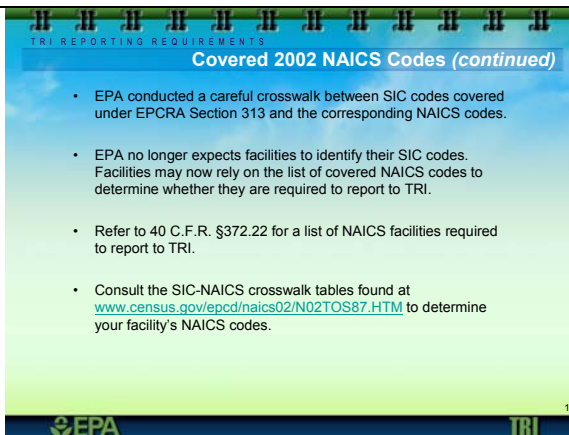
The US Office of Management and Budget adopted NAICS codes to replace the SIC Code System in 1997 and, in reporting year 2006, the TRI program began using the NAICS codes developed in 2002 to define which facilities are covered under TRI. In addition, the TRI forms now require that facilities report the NAICS codes that represent their facility's industry sector.

There is no one-to-one correlation between the old SIC code system and NAICS codes. The list of TRI-covered NAICS codes is rather lengthy. And it does include a number of exceptions and limitations.

Slide 16

Covered 2002 NAICS Codes (continued)

Duration: 00:00:51



Covered 2002 NAICS Codes (continued)

- EPA conducted a careful crosswalk between SIC codes covered under EPCRA Section 313 and the corresponding NAICS codes.
- EPA no longer expects facilities to identify their SIC codes. Facilities may now rely on the list of covered NAICS codes to determine whether they are required to report to TRI.
- Refer to 40 C.F.R. §372.22 for a list of NAICS facilities required to report to TRI.
- Consult the SIC-NAICS crosswalk tables found at www.census.gov/epcd/naics02/N02TOS87.HTM to determine your facility's NAICS codes.

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Notes:

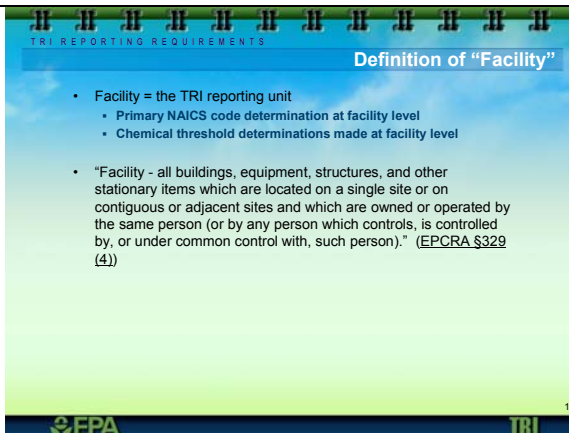
EPA conducted a careful crosswalk of the covered SIC codes to the 2002 NAICS codes. Therefore, facilities that were covered by TRI under previous years based on their SIC code classifications will also be covered under the NAICS code classifications. SIC codes are no longer necessary to determine whether your facility is covered by TRI. Instead, facilities can rely on the list of NAICS codes that is published in Chapter 40 Section 372.22 of the Code of Federal Regulations.

To identify your facility's NAICS codes using its SIC codes, facilities can access a crosswalk between the old SIC code system and the new NAICS codes at the website shown here.

Slide 17

Definition of "Facility"

Duration: 00:01:21



Definition of "Facility"

- Facility = the TRI reporting unit
 - Primary NAICS code determination at facility level
 - Chemical threshold determinations made at facility level
- "Facility - all buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person (or by any person which controls, is controlled by, or under common control with, such person)." (EPCRA §329 (4))

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Notes:

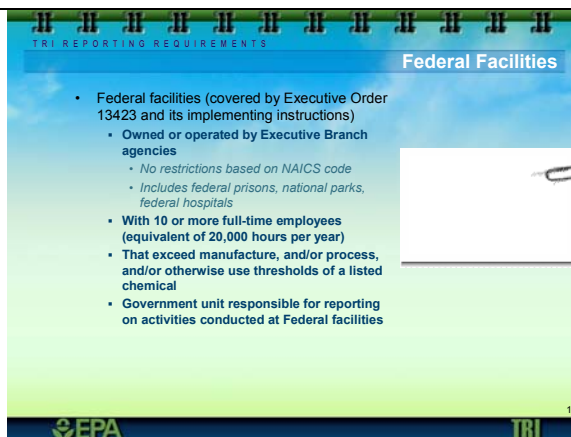
As previously mentioned, the reporting unit under TRI is the facility. Primary NAICS codes determinations and employee threshold determinations are made at the facility level. Chemical threshold determinations are also made at the facility level. Therefore, the definition of a facility under TRI is very important. EPA defines a facility as "all buildings, equipment, structures, and other stationary items which are located on a single site or contiguous or adjacent sites and which are owned or operated by the same person (or by any person which controls, is controlled by, or under common control with such person)."

A key point here is that establishments or operations owned or operated by the same company or federal agency that are contiguous or adjacent are considered a single facility under TRI. In some instances, a single site or adjacent properties may be have multiple and distinct establishments, each considered to be a unique and separate economic unit. Together, these establishments comprise a single facility under TRI if they are owned or operated by the company or agency.

Slide 18

Federal Facilities

Duration: 00:00:50



- Federal facilities (covered by Executive Order 13423 and its implementing instructions)
 - Owned or operated by Executive Branch agencies
 - No restrictions based on NAICS code
 - Includes federal prisons, national parks, federal hospitals
 - With 10 or more full-time employees (equivalent of 20,000 hours per year)
 - That exceed manufacture, and/or process, and/or otherwise use thresholds of a listed chemical
 - Government unit responsible for reporting on activities conducted at Federal facilities

Notes:

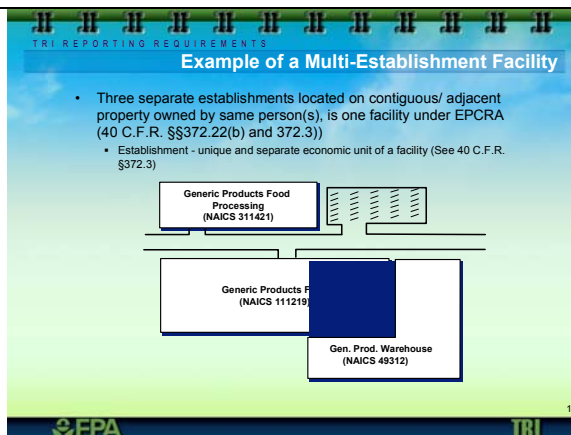
Federal facilities may also be covered by TRI. These are facilities that are owned or operated by the Executive Branch agencies. There are no restrictions based on NAICS codes for Federal facilities. So, any Federal facilities, such as prisons, national parks, or hospitals, could be covered under TRI.

Federal facilities also need to have 10 or more full time employees to be covered by TRI. And, to be required to submit a TRI report, they would need to exceed one or more of the activity thresholds for the TRI chemicals present at the facility. The federal agency or department that owns or operates the facility is responsible for determining whether or not it is required to report.

Slide 19

Example of a Multi-Establishment Facility

Duration: 00:00:54



- Three separate establishments located on contiguous/ adjacent property owned by same person(s), is one facility under EPCRA (40 C.F.R. §§372.22(b) and 372.3))
 - Establishment - unique and separate economic unit of a facility (See 40 C.F.R. §372.3)

Notes:

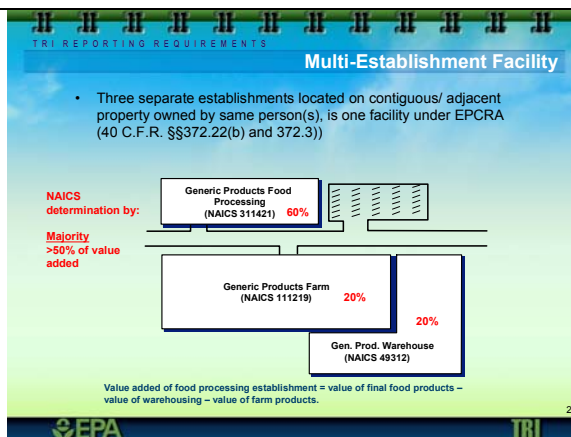
We mentioned that establishments are unique economic units within a facility. In the facility shown here, there are three unique establishments. There is a food processing establishment, a farm, and a warehouse. These establishments are all owned by the same company and are located at adjacent or contiguous sites and, therefore, are together considered a single facility under TRI. However, only the NAICS code of the processing establishment is a covered NAICS code under TRI.

Whether or not this facility would be covered by TRI in part depends upon which of the establishment's NAICS codes becomes the primary NAICS code of the entire facility. The primary NAICS code for the facility is determined by the economic value provided by each of the establishments.

Slide 20

Multi-Establishment Facility

Duration: 00:00:50



Notes:

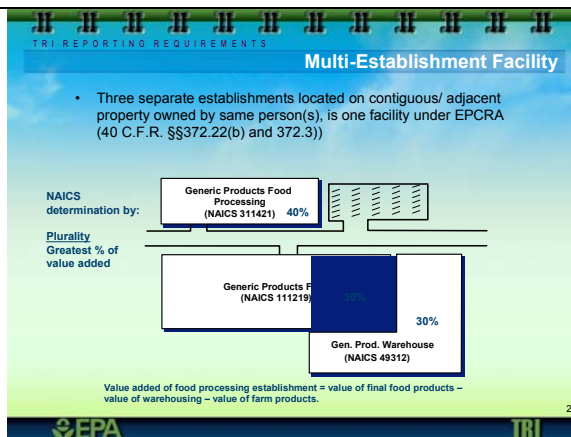
If any of these establishments contributes the majority of the economic value, or 'value added', of the facility, the NAICS code for that establishment would become the primary NAICS code for the entire facility. Essentially, 'value added' can be thought of as the value of the services the establishment provides, or the value of the products leaving the establishment less the value of the materials entering the establishment.

In this case, the processing facility, NAICS code 311421, comprises 60% of the 'value added' for the entire facility. The farm and the warehouse each comprise 20%. Therefore, the primary NAICS code for the entire facility is 311421.

Slide 21

Multi-Establishment Facility

Duration: 00:00:30



Notes:

If no establishment contributes the majority of the value added, the primary NAICS code for the facility becomes that of the establishment that has the largest percent of the value added. In this case, the processing facility of NAICS code 311421 comprises 40% of the value added, whereas the farm and the warehouse each comprise 30%. In this case, based on the plurality, the processing NAICS code again becomes the NAICS code for the entire facility.

Because the processing NAICS code is one that is covered under TRI, the entire facility would need to consider its employee thresholds and chemical use.

Slide 22

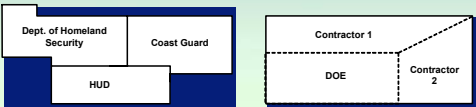
Multi-Establishment Facility

Duration: 00:02:03

TRI REPORTING REQUIREMENTS



Multi-Establishment Facility

- Determining how facilities report
 - Federal facilities and government-owned, contractor-operated facilities (GOCO's)
 - See Appendix A of *Reporting Forms and Instructions* for guidance specific to federal facilities



Ex. 1: Two separate reporting facilities (HUD and DHS including Coast Guard)

Ex. 2: One reporting facility (DOE)

Notes:

Federal facilities can also be made up of multiple establishments. Let's look at a couple of examples where we have multiple establishment Federal facilities that might be required to report under TRI.

In the example on the left, there are three separate government establishments operating independently on the same or adjacent properties. There is the Department of Homeland Security, the Coast Guard, and the Department of Housing and Urban Development. Under TRI, these establishments would fall under two separate facilities. One facility would be made up of the HUD establishment.

The other facility would be made up of the Coast Guard and Department of Homeland Security establishment. The Coast Guard is part of DHS and, therefore, DHS is the parent agency for the Coast Guard. Assuming there are 10 or more full-time employees working for the facility, DHS would then be responsible for identifying and quantifying the TRI chemical use at both the DHS and Coast Guard establishments and applying that towards the activity thresholds for the entire facility. Likewise, HUD would also be responsible for identifying all the chemicals at the HUD facility and applying that towards their activity thresholds.

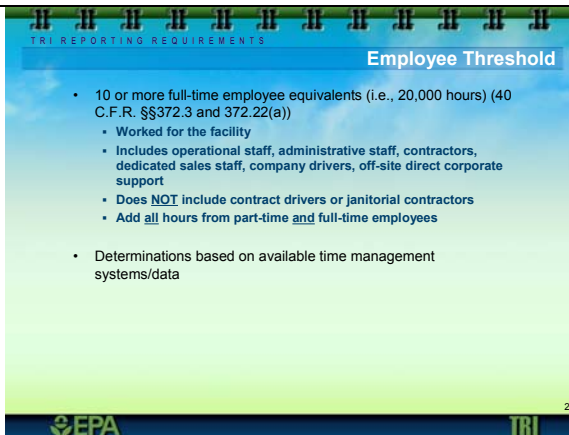
In the example on the right, there is a single Federal agency and two contractors operating independently at the same facility. In this case, the three establishments would be considered a single facility and DOE, as the parent agency, would be responsible for quantifying the toxic chemicals use at the entire facility and applying that towards the activity thresholds.

In both examples, while threshold determinations must be done at the facility level, any subsequent reporting required could be done by each of the establishments separately.

Slide 23

Employee Threshold

Duration: 00:00:56



Employee Threshold

- 10 or more full-time employee equivalents (i.e., 20,000 hours) (40 C.F.R. §§372.3 and 372.22(a))
 - Worked for the facility
 - Includes operational staff, administrative staff, contractors, dedicated sales staff, company drivers, off-site direct corporate support
 - Does **NOT** include contract drivers or janitorial contractors
 - Add **all** hours from part-time **and** full-time employees
- Determinations based on available time management systems/data

EPA TRI

Notes:

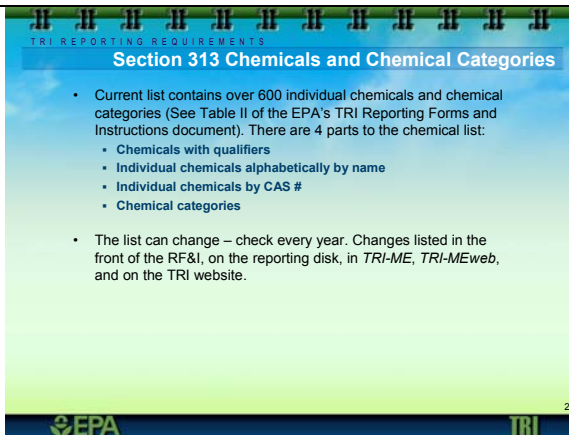
For private sector facilities that have determined that they meet the primary NAICS code requirements and Federal facilities, the next step is to determine whether or not they meet the employee threshold requirement. As mentioned, facilities with 10 or more full-time employees are covered by TRI.

10 or more full-time employees is defined as 20,000 hours worked at or for the facility. This includes operational staff, administrative staff, contractors, sales staff, drivers, and off-site corporate support. The only thing it doesn't include is contracted drivers and contracted janitorial services. Facilities need to add up all of the hours, both part-time and full-time, worked at their facility, and apply that towards this 20,000 hour threshold.

Slide 24

Section 313 Chemicals and Chemical Categories

Duration: 00:01:02



Section 313 Chemicals and Chemical Categories

- Current list contains over 600 individual chemicals and chemical categories (See Table II of the EPA's TRI Reporting Forms and Instructions document). There are 4 parts to the chemical list:
 - Chemicals with qualifiers
 - Individual chemicals alphabetically by name
 - Individual chemicals by CAS #
 - Chemical categories
- The list can change – check every year. Changes listed in the front of the RF&I, on the reporting disk, in *TRI-ME*, *TRI-MEweb*, and on the TRI website.

EPA TRI

Notes:

So what are the TRI chemicals? The current TRI chemical list contains over 600 individual chemicals and chemical categories. The list can be found in EPA's Reporting Forms and Instructions in Table II, which is available on the TRI website and through the TRI-ME reporting software.


There are four parts to the chemical list. First is a list of the chemicals with their qualifiers. These chemicals are listed alphabetically by name. They're also listed by their CAS number or chemical abstract number. There is also a list of chemical categories. Coming up we will go over the differences between individual chemicals and chemical categories in more detail. Be aware that the TRI chemical list can change from year to year. Make sure that you're always using the most current TRI chemical list.

Slide 25
For Which TRI-Listed Chemicals Must I Submit a TRI Report?
Duration: 00:00:33

TRI REPORTING REQUIREMENTS

For Which TRI-Listed Chemicals Must I Submit a TRI Report?

1. Are any of these chemicals used or created at my facility?
2. Is the chemical involved in a TRI threshold activity at my facility?
 - Manufacture
 - Process
 - Otherwise Use
3. Does the quantity of the chemical used in a threshold activity at my facility exceed the TRI regulatory threshold?



25

Notes:

For Federal facilities and private sector facilities with covered primary NAICS codes, having 10 or more full time employees, the next step is to determine whether or not there are TRI chemicals present at the facility; whether or not these chemicals are involved in any of the threshold activities, manufacturing, processing, and otherwise use; and whether or not the quantity of the chemical involved in the threshold activity over the reporting year exceeds the TRI reporting threshold.

Slide 26
Quiz 1
Duration: 00:02:00

EPA TRI

Articulate Quizmaker Quiz Placeholder - Quiz 1

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Slide 27

Section 313 Chemicals With Qualifiers

Duration: 00:01:22

TRI REPORTING REQUIREMENTS

Section 313 Chemicals With Qualifiers

- Qualifiers - Listed chemicals with parenthetical qualifiers subject to TRI reporting only if manufactured, processed, or otherwise used in specified form (40 C.F.R. §372.25(g)). Below are some examples (see Table II of EPA's *TRI Reporting Forms and Instructions* document):

Chemical	CAS #	Qualifier
Aluminum	7439-90-5	Fume or dust
Aluminum Oxide	1344-28-1	Fibrous forms
Asbestos	1332-21-4	Friable forms
Isopropyl alcohol	67-63-0	Only manufacturers using strong acid process
Phosphorus (not phosphate)	7723-14-0	Yellow or white
Saccharin	81-07-2	Manufacture only
Hydrochloric acid	7647-01-0	Acid aerosols
Sulfuric acid	7664-93-9	Acid aerosols
Vanadium	7440-62-2	Except when contained in alloy

EPA TRI

Notes:

Many of the listed TRI chemicals have parenthetical qualifiers. These chemicals are only subject to TRI reporting if they are manufactured, processed, or otherwise used in the specific form described in the qualifier. The tables shown here are just some of the qualifiers for TRI chemicals. For example, the first one, aluminum, has the qualifier 'fume or dust'. This means that aluminum would only be considered under TRI in the fume or dust form. Isopropyl alcohol is another example. It would only need to be considered under TRI if the facility is manufacturing isopropyl alcohol and using a process called the 'strong acid process'. Another example is sulfuric acid, which is only considered under TRI in an acid aerosol form. Facilities that have aqueous sulfuric acid which are not aerosolizing the acid in any way would not need to consider their sulfuric acid towards the threshold or reporting. These are just some of the qualifiers on the TRI chemical list. Facilities should always be sure to be aware of the chemical qualifiers associated with the chemicals that may be present at their facility.

Slide 28

Section 313 Chemical List

Duration: 00:00:15

TRI REPORTING REQUIREMENTS

Section 313 Chemical List

Example Individual Chemicals			
CAS #	Chemical	CAS #	Chemical
62-53-3	Aniline	1332-21-4	Asbestos (friable)
90-04-0	o-Anisidine	75-25-2	Bromoform (Tribromomethane)
104-94-9	p-Anisidine	74-83-9	Bromomethane (Methyl bromide)
134-29-2	o-Anisidine hydrochloride	75-63-4	Bromotrifluoromethane (Halon 1301)
128-12-7	Anthracene	1689-94-5	Bromoxynil (3,5-Dibromo-4-hydroxybenzonitrile)
7440-36-0	Antimony	1689-99-2	Bromoxynil octanoate
7440-38-2	Arsenic		

Example Chemical Categories	
N420	Lead Compounds Includes any unique chemical substance that contains lead as part of that chemical's infrastructure.
N450	Manganese Compounds Includes any unique chemical substance that contains manganese as part of that chemical's infrastructure.
N458	Mercury Compounds Includes any unique chemical substance that contains mercury as part of that chemical's infrastructure.

EPA TRI

Notes:

Here are some additional examples of TRI chemicals and chemical categories from the TRI chemical list. As we mentioned, the list includes the chemical name and its chemical abstract number or chemical category code.

Slide 29

TRI Chemical Categories

Duration: 00:01:09

TRI REPORTING REQUIREMENTS

TRI Chemical Categories

- Example metal compound chemical categories
 - Antimony Compounds
 - Arsenic Compounds
 - Barium Compounds *
 - Beryllium Compounds
 - Cadmium Compounds
 - Chromium Compounds
 - Cobalt Compounds
 - Copper Compounds ***
 - Cyanide Compounds ***
 - Lead Compounds
 - Manganese Compounds
 - Mercury Compounds
 - Nickel Compounds
 - Selenium Compounds
 - Silver Compounds
 - Thallium Compounds
 - Vanadium Compounds
 - Zinc Compounds

For all categories: Includes any unique chemical substance that contains the element or compound as part of that chemical's infrastructure

* Does not include Barium Sulfate CAS 7727-43-7

** Does not include copper Phthalocyanine compounds that are substituted with only hydrogen, and/or chlorine and/or bromine

*** XCN where X=H or any other group where a formal dissociation may occur. For example KCN or Ca(CN)₂

EPA TRI

Notes:

Facilities need to take care in identifying chemicals used or generated at their facility that may fall within a TRI chemical category group. Chemical categories are groups of individual chemicals which must be considered together towards activity thresholds and reporting under TRI.

Many chemical categories are metal compound chemical categories some of which are show here. In many cases, the elemental forms of the metal are also reportable as a separately listed TRI chemical.

Let's look at lead compounds as an example. Any unique chemical substance that contains lead as part of its chemical infrastructure would be considered part of the lead compounds chemical category.

Note that some of these chemical categories also contain qualifiers. For example, in the case of barium compounds, the category does not include barium sulfate; however, all other barium compounds would need to be considered toward this chemical category.

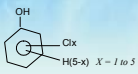
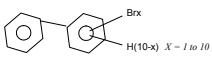
Slide 30

EPCRA TRI Chemical Categories (continued)

Duration: 00:00:30

TRI REPORTING REQUIREMENTS

EPCRA TRI Chemical Categories (continued)

Chlorophenols	
Diisocyanates	20 individual compounds cited in Category
Dioxin and Dioxin-Like Compounds:	17 individual compounds cited in Category
Ethylenebisdithiocarbamic acid, salts and esters (EBDCs)	Includes a substance that may contain EBDC or EBDC salt or ester as part of its infrastructure
Certain Glycol Ethers	Complex definition
Nicotine and salts	Includes a substance that may contain it or salt as part of its infrastructure
Nitrate compounds	water dissociable, reportable only when in aqueous solution
Polybrominated Biphenyls (PBBs)	

EPA TRI

Notes:

Organic chemicals can also be grouped into chemical categories under TRI. In some cases, the category is defined as a general class of chemicals, for example, in the case of chlorophenols. And in other cases, there is a list of individual chemicals that makes up the chemical category. In the case of dioxin and dioxin-like compounds, there are 17 individual compounds that make up the chemical category.

Slide 31

EPCRA TRI Chemical Categories (continued)

Duration: 00:00:08

EPCRA TRI Chemical Categories (continued)	
Polychlorinated alkanes (C10 to C13)	1.0% de minimis, except for those members of the category that have an average chain length of 12 carbons and contain an average chlorine content of 60% by weight, which are subject to the 0.1 % de minimis. $C_nH_{2n+2-y}Cl_y$ where $x = 10$ to 13 ; $y = 3$ to 12 ; and avg chlorine content ranges from 40-70% with the limiting molecular formulas: $C_{10}H_{19}Cl_3$ and $C_{13}H_{16}Cl_{12}$
Polycyclic aromatic compounds (PACs)	21 individually listed compounds in this category
Strychnine and salts	Includes any substance that may contain Strychnine and or its salt as part of its infrastructure
Warfarin and salts	Includes any substance that may contain Warfarin and or its salt as part of its infrastructure

Notes:

These are some additional organic chemical categories. And note the qualifiers associated with many of these.

Slide 32

Section IV: Threshold Determinations

Duration: 00:00:05



Notes:

Slide 33

Threshold Determinations

Duration: 00:01:03

Thresholds (PBT and Non-PBT)

- Activity thresholds are mutually exclusive
 - Classify each facility activity into manufacture, process, or otherwise use
 - Compare amounts in each activity to its threshold
- A discrete amount of a chemical may be applied to more than one activity threshold
 - For example, a facility may generate a chemical on-site (manufacturing) and then prepare that chemical for distribution in commerce (processing)
- Threshold calculations for each activity are based on cumulative quantities of each Section 313 chemical over the reporting year

If any threshold is exceeded, a TRI Report must be prepared and submitted for that chemical

Notes:

As previously mentioned, TRI reporting is only triggered when a facility exceeds one or more of the three activity thresholds: manufacturing, processing, and otherwise use. Facilities must quantify the amount of each TRI chemical and chemical category involved in each of these three activities. Then, compare the amounts to the thresholds. In some cases the same discrete amount of a TRI chemical can go through more than one threshold activity. In such cases, the chemical must be counted towards each threshold activity.

Slide 33 - Continued Threshold Determinations

Duration: 00:01:03

Notes:

Remember that threshold calculations are based on cumulative quantities of each TRI chemical over the reporting year. If a threshold is exceeded for any of the threshold activities, then a TRI report must be prepared and submitted for that chemical. Now, let's look at each of the three threshold activities in more detail.

Slide 34 Manufacturing Activities

Duration: 00:00:55

TRI REPORTING REQUIREMENTS

Manufacturing Activities

- Manufacturing (EPCRA §313(b)(1)(C)(i) and 40 C.F.R. §372.3) - generating a Section 313 chemical
 - Intentionally producing chemicals for:
 - Sale
 - Distribution
 - On-site use or processing (e.g., intermediates)
- Coincidentally producing chemicals as impurities* or byproducts**:
 - At any point at the facility, including waste treatment and fuel combustion
- Importing
 - "Cause" to be imported

*Impurity=TRI chemical that still remains with the final facility product as it is distributed into commerce
**By-product=TRI chemical that is separated out from the process mixture before it becomes the final product

EPA TRI 34

Notes:

The first is manufacturing. Manufacturing includes intentionally producing the TRI chemical because that is what your facility does – either manufactures the TRI chemical for sale or distribution – or manufactures it to be used on-site in another process.

Chemicals can also be coincidentally manufactured, in which case the chemical is not intentionally manufactured but it is created as an impurity or byproduct in the process. Coincidentally manufacturing a TRI chemical can happen at any point in the facility, including in waste treatment and when combusting fuels. Importing of a TRI chemical, or causing a TRI chemical to be imported into the United States, is also considered to be a manufacturing activity under TRI.

Slide 35 Processing Activities

Duration: 00:00:60

TRI REPORTING REQUIREMENTS

Processing Activities

- Processing (EPCRA §313(b)(1)(C)(ii) and 40 C.F.R. §372.3) - preparation of a Section 313 chemical into a product for distribution in commerce:
 - Use as a reactant to manufacture another substance or product
 - Add as a formulation component
 - Incorporate as an article component
 - Repackage for distribution
 - Including quantities sent off-site for recycling
- Incidentally include as an impurity

EPA TRI 35

Notes:

The next threshold activity is processing. Processing of a TRI chemical involves distributing a TRI chemical into commerce. This can be done either as a reactant in the manufacturing of another substance which is distributed into commerce, or it could be that the TRI chemical is being added as a formulation or article component to a product which is then distributed into commerce. Repackaging of a TRI chemical with subsequent distribution into commerce also is a processing activity under TRI. Note that, under TRI, processing also includes sending a TRI chemical off-site for recycling. Finally, processing may also include the unintentional processing of a TRI chemical if it appears as an impurity in a raw material that your facility uses and which leaves the facility in the product.

Slide 36

Repackaging as a Processing Activity

Duration: 00:01:24

TRI REPORTING REQUIREMENTS

Repackaging as a Processing Activity

- Repackaging a Section 313 chemical for distribution in commerce is considered processing
 - Repackaging includes transfer:
 - From container to tanker truck and vice versa
 - Between similar size containers
 - Via pipeline to/from a tank
 - Repackaging does not include:
 - Sampling without repackaging
 - Re-labeling
- Repackaging without distribution into commerce is not considered processing

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Notes:

Let's look at repackaging in more detail. Any repackaging of a TRI chemical for distribution in commerce is considered processing. Repackaging could be from any type of container to any other type of container. The containers could be similar sizes, or they could be very different such as pipelines into tanks or vice-versa.

As long as the TRI chemical is going from one container to another and then is being distributed into commerce, the chemical would be considered processed under TRI. Repackaging does not include taking samples from containers for the purposes of quality assurance and it does not include simple re-labeling of a container. As long as the TRI chemical stays within the container, placing a label on the container itself would not be considered repackaging.

Any repackaging without distribution into commerce would not be considered processing. For example, TRI chemicals contained in a 55 gallon drum that are placed into smaller containers and distributed around the facility to be used at the facility and which are not being distributed into commerce would not be considered towards the processing thresholds.

Slide 37

Otherwise Use Activities

Duration: 00:00:38

TRI REPORTING REQUIREMENTS

Otherwise Use Activities

- Otherwise Use (40 C.F.R. §372.3) - includes most activities that are NOT manufacturing or processing.

Examples

- Chemical processing aid (e.g., solvents)
- Manufacturing aid (e.g., lubricants, refrigerants)
- Ancillary activities (e.g., chemicals used to remediate wastes)
 - Fabrication and/or use of tools in your process
 - Installation of piping and process-related equipment, e.g., constructing storage tanks

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Notes:

'Otherwise use' includes most activities that are not considered manufacturing or processing. Chemicals that are otherwise used include chemical processing aids like solvents, manufacturing aids like lubricants, refrigerants, or catalysts. Otherwise use often includes ancillary activities, chemicals that are used, for example, to remediate wastes or chemicals that are used to clean process equipment.

Chemicals that are contained within tools or other equipment at the facility would be considered otherwise used.

Slide 38
Otherwise Use Activities (continued)
Duration: 00:00:44

Otherwise Use Activities (continued)

Otherwise Use ALSO INCLUDES:

- Disposal, stabilization (without subsequent distribution in commerce), or treatment for destruction on-site if:
 - Section 313 chemical was received from off-site for the purposes of further waste management, or
 - Section 313 chemical was manufactured as a result of waste management activities on materials received from off-site for the purpose of further waste management.
- Waste management activities include recycling, combustion for energy recovery, treatment for destruction, waste stabilization and release (including disposal).

Notes:

Otherwise use also includes any disposal, stabilization, or treatment for destruction of a TRI chemical if the chemicals are received from off-site for the express purposes of further waste management.

In addition, TRI chemicals that are manufactured as a result of waste management activities on any material that is received from off-site for the purpose of waste management would be considered towards your otherwise use threshold. Under TRI, waste management activities include recycling, combustion for energy recovery, treatment for destruction, waste stabilization and release to the environment, including disposal.

Slide 39
Calculating Activity Thresholds
Duration: 00:00:53

Calculating Activity Thresholds

- The threshold quantity is the total amount manufactured, processed, or otherwise used, NOT the amount released.
- Calculate the total amount of Section 313 chemical used for a specific threshold activity.
- For threshold determinations, Section 313 chemicals recycled from spent or contaminated materials or Section 313 chemicals directly reused:
 - Count original amount used only once
 - Materials in use from previous years, count only the quantity added during current reporting year
- Calculations for reporting waste management may be different.

Notes:

When calculating activity thresholds, facilities must remember that the threshold quantity is the total amount of the chemical that is manufactured, processed, or otherwise used over the reporting year. It is not the amount of TRI chemical that was released or managed as waste. Remember to apply the total amount of the chemical to each activity threshold including all threshold activities at the facility. If your facility reuses or recycles TRI chemicals over and over through the reporting year, only the original amount is counted towards the activity thresholds plus any amount that was added during the year.

Note that it is not critical to calculate the threshold quantity exactly; however, it is important to know whether or not you have exceeded the threshold.

Slide 40
Threshold Determination for Compound Categories
Duration: 00:00:39

Threshold Determination for Compound Categories

- Count together all compounds that fall within a category for each activity, even if different compounds within a category are used in separate operations
- Consider the entire weight of the compounds in the category when determining thresholds
- Note: calculations for release and other waste management estimates of metal compounds based on the parent metal weight only; and for nitrate compounds are based on weight of nitrate ion only

EPA TRI 40

Notes:

When determining thresholds for chemical categories, be sure to count all the compounds that fall within the category. Even if they're different compounds used in different operations around your facility. Apply the entire weight of the compounds in the category when determining your thresholds quantities.

Note that while the weight of the entire compound must be applied to the threshold for the chemical category, releases and other waste management estimates for Form R reporting have different requirements for metal and nitrate compounds. These reporting requirements are discussed in detail later in this module.

Slide 41
Activities That Are Not TRI Threshold Activities
Duration: 00:01:35

Activities That Are Not TRI Threshold Activities

- Activities that, alone, do NOT constitute a threshold activity
 - Storage
 - Remediation of on-site contamination (assuming no listed chemicals are manufactured during remediation)
 - Re-labeling without repackaging
 - Direct reuse onsite
 - On-site recycling (not including wastes received from off-site)
 - Transfers sent off-site for further waste management (not including recycling)

Note: While these activities are not included in the threshold determination, releases and wastes from these uses are not exempt from reporting if threshold is exceeded through other activities (unless specifically eligible for one of the reporting exemptions).

EPA TRI 41

Notes:

There are some activities that are not considered to be threshold activities under TRI. In other words, the activities are not considered manufacturing, processing, or otherwise use. For example, storage. In itself, storage of a TRI chemical would not need to be considered towards an activity threshold. Remediation of on-site contamination would not be considered a threshold activity as long as the waste was on-site and not brought in from off-site for the purposes of waste treatment, or waste management.

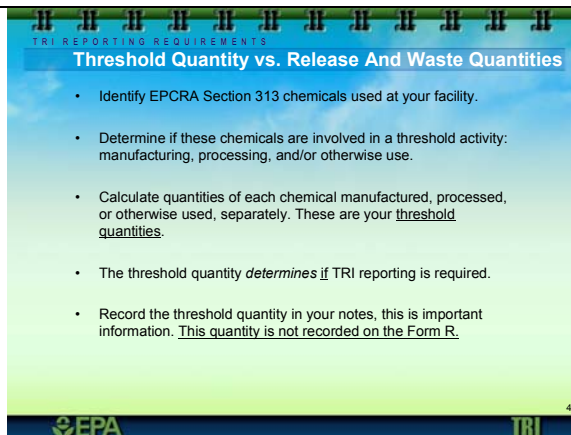
As mentioned, re-labeling of a container without repackaging is not considered a threshold activity. Directly reusing a TRI chemical on-site and any on-site recycling of a TRI chemical are not considered threshold activities. Transferring of a TRI chemical off-site for further waste management, not including offsite recycling, is not considered a threshold activity.

None of the TRI chemicals associated with these activities would need to be considered towards an activity threshold. However, if a TRI chemical threshold was exceeded in some other manner at your facility, a TRI form would be required for that chemical. Any release and waste management reporting for that chemical would need to include any releases or other waste management associated with all activities, including those shown here.

Slide 42

Threshold Quantity vs. Release And Waste Quantities

Duration: 00:01:03



TRI REPORTING REQUIREMENTS

Threshold Quantity vs. Release And Waste Quantities

- Identify EPCRA Section 313 chemicals used at your facility.
- Determine if these chemicals are involved in a threshold activity: manufacturing, processing, and/or otherwise use.
- Calculate quantities of each chemical manufactured, processed, or otherwise used, separately. These are your threshold quantities.
- The threshold quantity *determines if* TRI reporting is required.
- Record the threshold quantity in your notes, this is important information. This quantity is not recorded on the Form R.

EPA TRI 42

Notes:

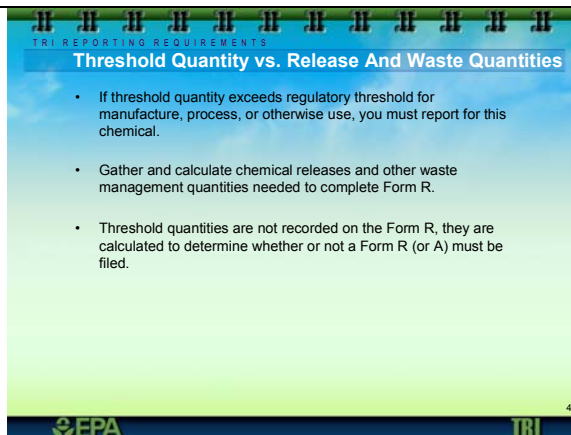
Now, we will summarize the difference between threshold quantity determinations and the release and waste management quantity estimates for TRI reporting. The TRI reporting process first involves identifying the chemicals present at your facility that are on the TRI chemical list. Next you identify those chemicals that are involved in a threshold activity, either manufacturing, processing, or otherwise use.

Next you calculate the quantity of each chemical that is manufactured, processed, or otherwise used. This is done separately for each threshold activity. The threshold quantities are what determine whether or not reporting to TRI is required. The quantity itself is not reported on the TRI form. It's important to keep notes and records of those quantities and the calculations used, but again, it does not get reported on the TRI form.

Slide 43

Threshold Quantity vs. Release And Waste Quantities

Duration: 00:00:34



TRI REPORTING REQUIREMENTS

Threshold Quantity vs. Release And Waste Quantities

- If threshold quantity exceeds regulatory threshold for manufacture, process, or otherwise use, you must report for this chemical.
- Gather and calculate chemical releases and other waste management quantities needed to complete Form R.
- Threshold quantities are not recorded on the Form R, they are calculated to determine whether or not a Form R (or A) must be filed.

EPA TRI 43

Notes:

Only if a threshold quantity is exceeded for either manufacturing, processing, or otherwise use, would a facility be required to submit a TRI report. For each of those chemicals, information on how and what quantities are managed as waste are reported on the TRI form. So again, threshold quantities are not reported under TRI. But, they are necessarily calculated to determine whether or not a Form R or Form A report must be completed and submitted.

Slide 44

Section 313 Chemicals (Non-PBT) and Thresholds

Duration: 00:00:32

Section 313 Chemicals (Non-PBT) and Thresholds

- A facility meeting all applicable criteria must file a TRI Report for a non-PBT Section 313 chemical if the facility:

Non-PBT Thresholds

- Manufactured (including imported) more than 25,000 pounds of the chemical in the reporting year, **or**
- Processed more than 25,000 pounds of the chemical in the reporting year, **or**
- Otherwise Used more than 10,000 pounds of the chemical in the reporting year

Notes:

We have described the threshold activities. Now, what are the actual threshold quantities that would trigger TRI reporting? For chemicals that are not considered PBT's, or for non-PBT chemicals, the thresholds for manufacturing are 25,000 pounds; for processing, 25,000 pounds; and for otherwise use, 10,000 pounds. These are the threshold quantities for the majority of the TRI chemicals.

Slide 45

Listed PBT TRI Chemicals

Duration: 00:00:26

Listed PBT TRI Chemicals

- Within the list of 600+ chemicals and chemical categories, there is a subset of chemicals designated as chemicals of special concern and often referred to as PBT chemicals (40 C.F.R. § 372.28)
- PBT chemicals have lower thresholds and different reporting requirements than the other TRI chemicals
 - Special rules often apply to PBT chemicals
- 20 chemicals and chemical categories are subject to the PBT and lead rules

PBT = Persistent, Bioaccumulative, Toxic

Notes:

Persistent bioaccumulative toxic chemicals, or PBTs, are a subset of the chemicals on the TRI chemical list. PBT chemicals have lower thresholds than other TRI chemicals and they also have some special rules when reporting them to TRI. Currently there are 20 chemicals and chemical categories that are designated as PBT's under TRI.

Slide 46

PBT Chemicals

Duration: 00:00:09

PBT Chemicals

- Aromatics** - Benzo(g,h,i)perylene, Dioxin and dioxin-like compounds category, Hexachlorobenzene, Octachlorostyrene, Pentachlorobenzene, Polycyclic aromatic compounds (PAC) category, Polychlorinated biphenyl (PCB), and Tetrabromobisphenol A (TBBPA)
- Metals** - Mercury, Mercury compounds category, Lead, and Lead compounds category
- Pesticides** - Aldrin, Chlordane, Heptachlor, Isodrin, Methoxychlor, Pendimethalin, Toxaphene, Trifluralin

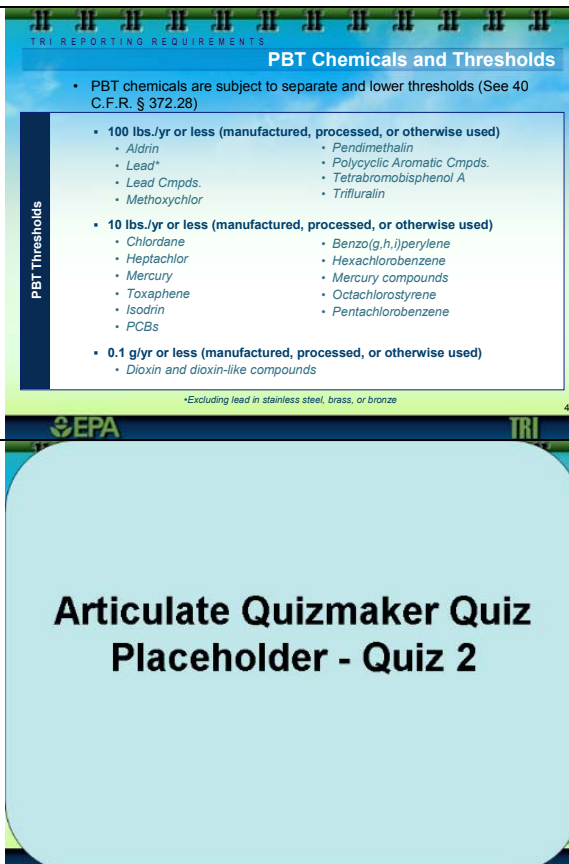
Notes:

These PBT chemicals include aromatic compounds, metals and metal compounds, and pesticides. They are all listed here.

Slide 47

PBT Chemicals and Thresholds

Duration: 00:00:39



PBT Chemicals and Thresholds

- PBT chemicals are subject to separate and lower thresholds (See 40 C.F.R. § 372.28)

PBT Thresholds

- 100 lbs./yr or less (manufactured, processed, or otherwise used)**
 - Aldrin
 - Lead*
 - Lead Cmpds.
 - Methoxychlor
 - Pendimethalin
 - Polycyclic Aromatic Cmpds.
 - Tetrabromobisphenol A
 - Trifluralin
- 10 lbs./yr or less (manufactured, processed, or otherwise used)**
 - Chlordane
 - Heptachlor
 - Mercury
 - Toxaphene
 - Isodrin
 - PCBs
 - Benzo(g,h,i)perylene
 - Hexachlorobenzene
 - Mercury compounds
 - Octachlorostyrene
 - Pentachlorobenzene
- 0.1 g/yr or less (manufactured, processed, or otherwise used)**
 - Dioxin and dioxin-like compounds

*Excluding lead in stainless steel, brass, or bronze

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Notes:

The actual threshold quantities that trigger reporting vary depending on the chemical. For eight of the chemicals, the threshold is 100 pounds per year. For those chemicals that are considered to be highly persistent and bioaccumulative, the threshold is 10 pounds per year. And for dioxin and dioxin-like compounds, the threshold is .1 grams per year, which reflects the highly toxic nature of this chemical category. For PBT chemicals, the threshold quantities are the same for manufacturing, processing, and otherwise use.

Slide 48

Quiz 2

Duration: 00:02:00

Advance mode: By user

Articulate Quizmaker Quiz Placeholder - Quiz 2

Slide 49
**TRI Chemicals
Contained in Mixtures**
Duration: 00:00:58

TRI REPORTING REQUIREMENTS

TRI Chemicals Contained in Mixtures

- Chemical Component (See 40 C.F.R. §372.30) - count toward threshold the weight of "each listed Section 313 chemical known to be present"
- "Known" concentration - knowledge based on Material Safety Data Sheet (MSDS), analytical data, process knowledge, labeling, literature, other vendor-supplied information, or existing analysis
- If concentration is otherwise unknown (can't be determined based on above), threshold determination for the Section 313 chemical is not required

EPA TRI 49

Notes:

TRI chemicals are often one of a number of chemical components contained in a mixture. Only the actual amount of the TRI chemical in the mixture is counted towards the activity threshold. To calculate the threshold quantity the concentration of the chemical in the mixture is needed. In some cases the actual concentration of the TRI chemical in the mixture is known. In other cases the chemical concentration is not known. Chemical concentrations can be obtained from Material Safety Data Sheets, analytical data, your own process knowledge, from the labels of the containers, any literature associated with the product. Vendors may supply it. Or you may have additional data.

If a TRI chemical is not known to be present in a mixture, then a threshold determination for the TRI chemical is not required.

Slide 50
**TRI Chemicals
Contained in Mixtures**
Duration: 00:00:53

TRI REPORTING REQUIREMENTS

TRI Chemicals Contained in Mixtures

- For the threshold quantity, only include the portion of the TRI chemical in the mixture, not the weight of the entire mixture.
- The *de minimis* exemption (40 C.F.R. §372.38(a)) applies to non-PBT chemicals contained in mixtures at less than 1.0% or 0.1% (for carcinogens).
 - The *de minimis* exemption is related to the concentration of the chemical in a mixture, NOT the quantity of the mixture used.
- A metal alloy is a solid mixture. Multiply the percentage of the TRI chemical in the alloy by the total weight of alloy used to determine threshold quantity.

EPA TRI 50

Notes:

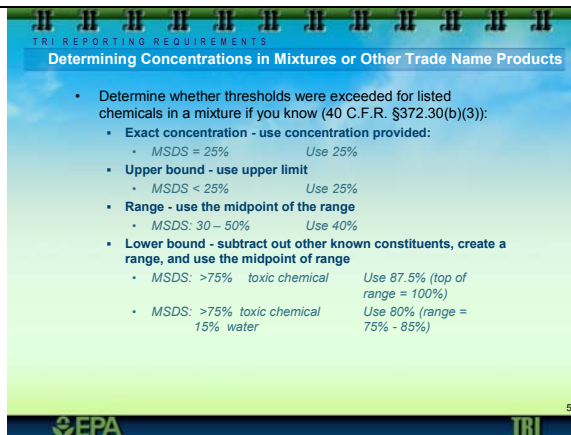
When determining threshold quantities, be sure to only include the portion of the mixture that is the TRI chemical, and not the weight of the entire mixture. The *de minimis* exemption, which we will discuss in detail, applies only to non-PBT chemicals that are in mixtures and in concentration that is less than 1% or .1% for carcinogens. The *de minimis* exemption allows for low concentrations of TRI chemicals in mixtures to be ignored in most cases.

It is not related to the quantity of the mixture used. Note that metal alloys are considered solid mixtures. Like any other mixture, you would multiply the percent of the TRI chemical that is in the alloy by the total weight of the alloy to determine the threshold quantity.

Slide 51



Determining Concentrations in Mixtures or Other Trade Name Products

Duration: 00:02:10



TRI REPORTING REQUIREMENTS
Determining Concentrations in Mixtures or Other Trade Name Products

- Determine whether thresholds were exceeded for listed chemicals in a mixture if you know (40 C.F.R. §372.30(b)(3)):
 - Exact concentration - use concentration provided:
 - MSDS = 25% Use 25%
 - Upper bound - use upper limit
 - MSDS < 25% Use 25%
 - Range - use the midpoint of the range
 - MSDS: 30 - 50% Use 40%
 - Lower bound - subtract out other known constituents, create a range, and use the midpoint of range
 - MSDS: >75% toxic chemical Use 87.5% (top of range = 100%)
 - MSDS: >75% toxic chemical Use 80% (range = 75% - 85%)
 15% water

Notes:

Concentration of a TRI chemical can often be obtained from the Material Safety Data Sheet or other product information. In some cases the exact concentration of the TRI chemical is provided. For example, in the case – if a Material Safety Data Sheet provides a concentration of 25% for a TRI chemical, facilities would use 25% for their activity threshold determinations and any subsequent reporting.

In other cases, the MSDS may provide only an upper bound for the TRI chemical. For example, if the MSDS says there is at most 25% of the TRI chemical, in those cases facilities would actually use 25%, the upper limit, in their calculations. Oftentimes an MSDS will provide a range for a TRI chemical. For example, if the MSDS says 30 to 50%, facilities would use the midpoint of the range – in this case, 40%.

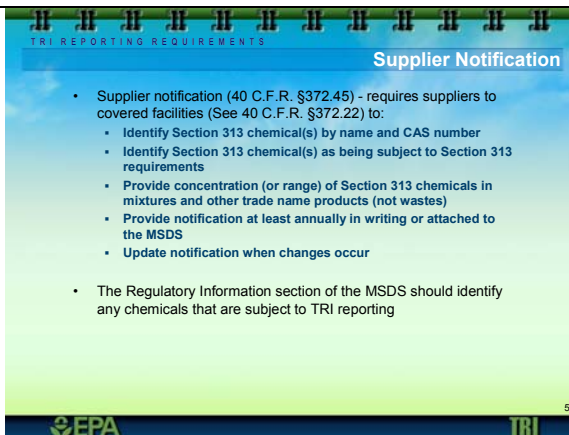
In some cases a lower bound is provided for a TRI chemical in a mixture. If a lower-bound is provided, facilities would subtract out any other known constituents, creating an upper bound, thereby creating their own range, and use the midpoint of the range. For example, if an MSDS says there are at least 75% of the TRI chemical. In that case, we know that there is anywhere between 75% and 100% of the TRI chemical. The midpoint of that range would be 87.5%.

In some cases, the MSDS may say there is at least 75% of the toxic chemical and there is also, for example, 15% water. In this case, we know that the upper bound is 85%. The midpoint of the range of 75 to 85% would be 80%.

Slide 52

Supplier Notification

Duration: 00:00:60



TRI REPORTING REQUIREMENTS

Supplier Notification

- Supplier notification (40 C.F.R. §372.45) - requires suppliers to covered facilities (See 40 C.F.R. §372.22) to:
 - Identify Section 313 chemical(s) by name and CAS number
 - Identify Section 313 chemical(s) as being subject to Section 313 requirements
 - Provide concentration (or range) of Section 313 chemicals in mixtures and other trade name products (not wastes)
 - Provide notification at least annually in writing or attached to the MSDS
 - Update notification when changes occur
- The Regulatory Information section of the MSDS should identify any chemicals that are subject to TRI reporting

EPA TRI 52

Notes:

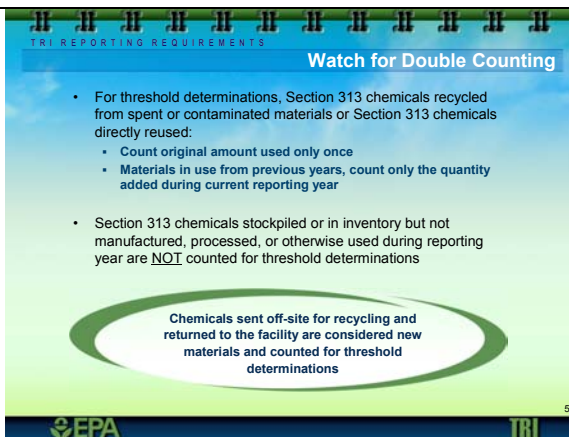
Under TRI, facilities that supply TRI chemicals to others must provide information about those TRI chemicals. For example, they must identify the TRI chemical by name and by CAS number and must identify that this chemical is subject to Section 313 or TRI reporting requirements. They must provide a concentration or a range of concentrations for the TRI chemical that is in a mixture or a trade name product.

They must provide this notification at least annually or attach it to the Material Safety Data Sheet for the chemical. If any changes occur related to the TRI chemical or its concentration, they must provide that information as well. Usually, MSDS's contain a Regulatory Information section which should identify the TRI chemicals present and their concentrations.

Slide 53

Watch for Double Counting

Duration: 00:00:47



TRI REPORTING REQUIREMENTS

Watch for Double Counting

- For threshold determinations, Section 313 chemicals recycled from spent or contaminated materials or Section 313 chemicals directly reused:
 - Count original amount used only once
 - Materials in use from previous years, count only the quantity added during current reporting year
- Section 313 chemicals stockpiled or in inventory but not manufactured, processed, or otherwise used during reporting year are NOT counted for threshold determinations

Chemicals sent off-site for recycling and returned to the facility are considered new materials and counted for threshold determinations

EPA TRI 53

Notes:

Be sure to watch out for double counting when calculating threshold quantities. Count the original amount of the chemical used in a threshold activity over the course of the reporting year only once. For materials that are in use from previous years, only count the quantity that was added during the current reporting year. Remember that chemicals that are stored or stockpiled that are not manufactured, processed, or otherwise used during the reporting year are not counted for threshold determinations.

Also note that any chemicals that are sent off-site for recycling and returned to the facility are considered new materials and would be counted again towards activity thresholds.

Slide 54

Watch for Double Counting Within the Same Activity Threshold!

Duration: 00:00:51

TRI REPORTING REQUIREMENTS

Watch for Double Counting Within the Same Activity Threshold!

- Example: If a chemical is blended into a product mixture, and then this mixture is packaged for sale into 55 gallon drums, these are both processing activities, the chemical is "processed" twice. Only count this quantity once towards the processing threshold.
 - During Reporting Year, 20,000 lbs. of toluene were blended with other chemicals to create a paint product.
 - The paint product (containing the 20,000 lbs. of toluene) was then packaged into 55 gallons drums for sale.
 - The processing threshold quantity for this facility for Reporting Year = 20,000 lbs.

EPA TRI 54

Notes:

Be sure to watch out for double accounting within the same activity threshold. For example, if a facility blends a TRI chemical in a product mixture and then the mixture is repackaged for sale into another container, those are both considered processing activities – the blending and the repackaging. While a chemical is processed twice, only count the quantity once towards the processing threshold.

For example, let's look at a facility where 20,000 pounds of toluene were blended with other chemicals to create a paint product. The paint product was then repackaged into 55 gallon drums for sale. The processing threshold for this facility for that reporting year is only 20,000 pounds.

Slide 55

Multi-Establishment Facility

Duration: 00:01:36

TRI REPORTING REQUIREMENTS

Multi-Establishment Facility

- Reporting as multi-establishment facility (40 C.F.R. §372.30(c))
 - Apply threshold determinations on aggregate amount of chemicals used at facility
 - Able to file separate Form R reports for each part of the facility (e.g., establishment or grouping of establishments) and the Form Rs must be designated as "part of a facility" in Part I, Section 4.2
 - Report all non-exempt releases and other waste management activities of reportable Section 313 chemicals for all parts of a facility
 - Avoid double-counting at the facility of chemicals involved in intra-facility transfers

EPA TRI 55

Notes:

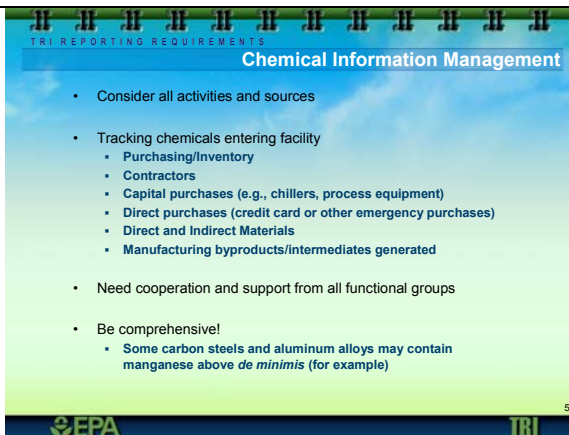
Facilities that are comprised of multiple establishments must take care to avoid both double counting and under counting of TRI chemicals used across the facility. Multi-establishment facilities are facilities that are comprised of separate economic or organizational units within the facility. Sometimes these separate units can create barriers to information exchange and gaps or overlaps in TRI reporting responsibilities. For threshold determinations facilities must consider the aggregate amount of TRI chemicals used throughout the facility, including all of the establishments. If a threshold is exceeded a TRI form is required. Multiple establishment facilities can file separate Form R reports for each part of the facility.

On the TRI Form R and in the reporting software, the filer can designate their submittal for a part of the facility. Remember to report all non-exempt releases and other waste management activities of reportable TRI chemicals for all parts of a facility. When reporting as multiple establishments, avoid double-counting of the same chemicals. When facilities do report as separate establishments within the same facility, the quantities on the reports will be added together by EPA, and the reports that are made available to the public will show the aggregate amounts.

Slide 56

Chemical Information Management

Duration: 00:01:07



Chemical Information Management

- Consider all activities and sources
- Tracking chemicals entering facility
 - Purchasing/Inventory
 - Contractors
 - Capital purchases (e.g., chillers, process equipment)
 - Direct purchases (credit card or other emergency purchases)
 - Direct and Indirect Materials
 - Manufacturing byproducts/intermediates generated
- Need cooperation and support from all functional groups
- Be comprehensive!
 - Some carbon steels and aluminum alloys may contain manganese above *de minimis* (for example)

Notes:

To ensure accurate TRI threshold determination, be sure to consider all activities and sources of the TRI chemicals at the facility. It might help to track chemicals as they enter the facility. Consider chemicals that are purchased or that are in inventory. Consider chemicals used by contractors, because you're responsible for your contractors' use of TRI chemicals as well. Don't forget capital purchases and one time purchases. And don't forget materials that may be manufactured as byproducts or intermediates. These should all be considered towards activity thresholds.

It helps to get the cooperation and support from all the different groups at the facility who may be purchasing or using TRI chemicals. Be comprehensive. For example, consider TRI chemicals that may be in steel or aluminum alloys that may be above the *de minimis* concentration. Manganese is one example.

Slide 57

Threshold Determinations

Duration: 00:00:59



Threshold Determinations

- Identify Chemicals and Concentrations:
 - MSDS
 - Product or Specifications
 - Available Supplier/Vendor Product QA/QC data
 - Industry Standards (API, ASTM, etc.)
 - Waste Profiles
 - Process Knowledge
 - Other References ([AP-42](#), Merck Index)
 - Supplier Notification
- Collect Data to Calculate Thresholds:
 - Inventory or Purchase Records
 - Throughput/Production Data
 - Integrated Supplier Records
 - EPCRA or [Other Env. Reports](#)
 - Air Permits / MACT or Similar Standards / Emission Inventories
 - Water Permits / DMR's / Discharge Reports
 - Annual/Biennial Waste Reports
 - User Records
 - Other Vendor Records (can call vendor)

Notes:

There are a number of different sources of information available to facilities – to both identify the chemicals and concentrations, collect the data, and calculate the thresholds. We have talked about some of these already – such as MSDS's and product specifications. Facilities should also consider any waste profiles or testing data. Also, consider using any other data about the wastes leaving and raw materials entering your facility. Inventory or purchase records are often a good source of information. Production data can help you in quantifying the amounts of TRI chemicals to apply towards thresholds.

Regulatory reports, either air permits or water, chemical analyses associated with permits applications, and waste reports – are all potential sources of information on TRI chemicals.

Slide 58

Example: EPCRA Section 313 Non-PBT Chemical Reporting Threshold Worksheet

Duration: 00:01:57

TRI REPORTING REQUIREMENTS

Example: EPCRA Section 313 Non-PBT Chemical Reporting Threshold Worksheet

Facility Name: OMNI CHEMICAL Date Worksheet Prepared:
 Toxic Chemical or Chemical Category: Toluene Prepared By: J.S.P.
 Reporting Year:

Step 1. Identify amounts of the toxic chemical manufactured, processed, or otherwise used.

Mixture Name or Other Identifier	Intentional Source	Percent by Weight	Total Weight (in lbs.)	Amount of the Toxic Chemical by Activity (in lbs.):		
				Manufactured	Processed	Otherwise Used
1. <u>Grease Degreaser</u>	<u>Paraffin Oil</u>	<u>8%</u>	<u>10,000</u>			<u>800</u>
2. <u>Yellow Bathroom Paint</u>	<u>Toluene</u>	<u>6%</u>	<u>20,000</u>			<u>1,200</u>
3. <u>Pink Washer Fluid</u>	<u>Paraffin Oil</u>	<u>4%</u>	<u>10,000</u>			<u>400</u>
4. <u> </u>						
5. <u> </u>						
6. <u> </u>						
Subtotal:				(A) <u> </u>	(B) <u> </u>	(C) <u>10,000</u> lbs.

Step 2. Identify exempt forms of the toxic chemical that have been included in Step 1.

Mixture Name as Listed Above	Applicable Exemption	Non-Fraction or Percent Exempt (if Applicable)	Exempt Amount of the Toxic Chemical from Above (in lbs.):		
			Manufactured	Processed	Otherwise Used
1. <u>Yellow Bathroom Paint</u>	<u>Struct. Comp.</u>	<u>100</u>			<u>1,200</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
Subtotal:			(D) <u> </u>	(E) <u> </u>	(F) <u>1,200</u> lbs.

Step 3. Calculate the amount subject to threshold. (A - F) lbs. (B - E) lbs. (G) 9,000 lbs.

Compare to thresholds for section 313 reporting. 25,000 lbs. 25,000 lbs. 10,000 lbs.

If any threshold is met, reporting is required for all activities. Do not submit this worksheet with Form R. Retain for your records.

EPA TRI

Notes:

Here we show a threshold worksheet, which can help you to quantify the amounts of TRI chemicals to apply towards your activity thresholds and to determine whether or not you've exceeded an activity threshold. In this example Omni Chemical has filled out a worksheet for toluene.

In the first step they've identified all the mixtures or products that contain toluene at their facility. A degreaser, some paints, and a wash parts washer fluid. They've recorded where this information was obtained, the percent of the TRI chemical by weight, and a total weight of the mixture. In each case they've multiplied the percent of the TRI chemical by the total weight to obtain the quantity of the TRI chemical that was either manufactured, processed, or otherwise used.

In this case, the toluene was all 'otherwise used.' The total quantity otherwise used is 10,500 pounds. The next step is to identify TRI chemicals that may fall under some of the exemptions that we will discuss later. In this case, the bathroom paint, the paint that's used in the bathrooms, is exempt under the structural components exemption.

None of the toluene in the bathroom paint would need to be considered towards the otherwise use activity threshold. So the facility is able to subtract the 1,500 pounds in the paint from their total to obtain 9,000 pounds of toluene that was otherwise used at the facility in the reporting year. Because the threshold for the otherwise use of toluene is 10,000 pounds, they have not exceeded the threshold and would not need to complete a TRI report for toluene.

Slide 59

Lessons Learned

Duration: 00:00:43

Lessons Learned

- Begin early**
 - Implement a program to gather "real-time" data on usage
 - Searches for historical information can be difficult
- Team approach**
 - Include all relevant personnel (e.g., engineering, purchasing, environmental, waste management, operations)
- Recordkeeping & Documentation**
 - Reduces burden for future years threshold determinations and reporting

Notes:

In threshold determinations and TRI reporting, it helps to begin the process early. Facilities should put systems into place that gather the information in real time. Researching information on TRI chemicals, oftentimes more than a year after they were used at your facility, can be difficult. Use the team approach. Spread the work by involving the people that are using or managing these TRI chemicals – engineers, people in purchasing, in the health and safety department are some examples. Be sure to keep good records, and to document your work. This will reduce the burden for future years.

Slide 60

Record Keeping and Documentation

Duration: 00:00:50

Record Keeping and Documentation

- Importance of good record keeping**
 - Detailed records improve reporting accuracy and data quality
 - Reduces replication of effort from year to year
 - Well-labeled calculations and engineering assumptions serve as standard operating procedures (SOPs) for future years
 - Ensures consistency from year to year, especially if personnel responsible for reporting change
- EPA Requirements**
 - Records used to complete Form R must be kept for three years (40 C.F.R. §372.10)
 - EPA may review records during a data quality audit

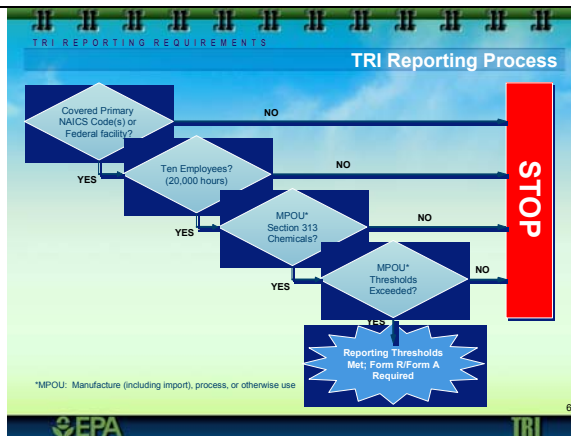
Notes:

It's very important to keep good records. Keeping detailed records improves the reporting accuracy and the quality of the data. Also it will reduce replication of effort from year to year. Facilities should also keep good records of calculations, information sources, and assumptions, so that they can form the basis of procedures for completing their threshold determinations and reports in future years. Such practices help insure consistency from year to year especially when the personnel responsible for TRI requirements changes. Also, record keeping is required by EPA. Facilities must keep their records for three years. And the EPA can review those records if an audit is conducted at the facility.

Slide 61




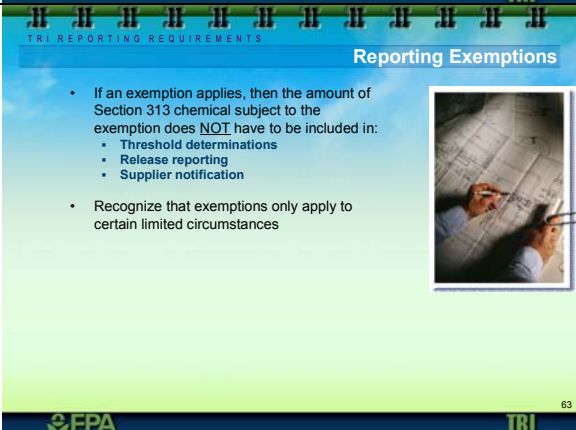
TRI Reporting Process

Duration: 00:01:22



Notes:

Before we continue with the TRI reporting process, let's summarize the steps for determining whether TRI reporting is required. To determine whether or not a facility needs to report to TRI, the first step is to determine whether or not the facility's primary NAICS code is one of the covered NAICS codes or if it is a Federal facility. If not, the facility is not covered by TRI and would not need to continue. If so, the next step is to determine whether or not it has 10 or more full time employees. If not, the facility is not covered by TRI.

<p>Slide 61 - Continued TRI Reporting Process Duration: 00:01:22</p>		<p>Notes:</p> <p>The next step is to determine whether or not the facility manufactures, processes, or otherwise uses TRI chemicals. If not, it would not need to report to TRI, but if so, the next step is to determine whether or not the facility has exceeded the threshold for manufacturing, processing, or otherwise using those TRI chemicals. If it has not exceeded any thresholds, no reports are required. If so, the facility would need to complete and submit a Form R or a Form A for each of the chemicals for which an activity threshold was exceeded.</p>
<p>Slide 62  Section V: Reporting Exemptions Duration: 00:00:05</p>		<p>Notes:</p>
<p>Slide 63  Reporting Exemptions Duration: 00:00:32</p>	 <ul style="list-style-type: none"> • If an exemption applies, then the amount of Section 313 chemical subject to the exemption does NOT have to be included in: <ul style="list-style-type: none"> • Threshold determinations • Release reporting • Supplier notification • Recognize that exemptions only apply to certain limited circumstances 	<p>Notes:</p> <p>Next we will be covering a number of exemptions to TRI reporting. The purpose of reporting exemptions is to reduce the burden of reporting associated with small or ancillary operations. If an exemption applies, then all the associated amount of the TRI chemical does not need to be included in threshold determinations, release reporting, or supplier notification. It's important to note that exemptions only apply in certain limited circumstances.</p>

Slide 64

Reporting Exemptions

Duration: 00:00:30

TRI REPORTING REQUIREMENTS

Reporting Exemptions

- Types of exemptions (40 C.F.R. §372.38)
 - *De minimis*
 - Article
 - Laboratory activities
 - NAICS code specific
 - Coal mining extraction activities
 - Metal mining overburden
 - "Otherwise use" exemptions
 - Motor vehicle maintenance
 - Routine janitorial or facility grounds maintenance
 - Structural components
 - Personal use
 - Intake water and air

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Notes:

The TRI exemptions include the de minimis exemption, the articles exemption, the laboratory activities exemption, and two exemptions that are specific to facilities in the coal mining and metal mining sectors. Also, there is a series of exemptions for the otherwise use of TRI chemicals in motor vehicle maintenance, routine janitorial or facility grounds maintenance, structural components, personal use, and intake water and air.

Slide 65

De Minimis Exemption

Duration: 00:01:04

TRI REPORTING REQUIREMENTS

De Minimis Exemption

- The quantity of a non-PBT Section 313 chemical in a mixture or other trade name product is eligible for the *de minimis* exemption (40 C.F.R. §372.38) if the chemical is:
 - An OSHA-defined carcinogen present at a concentration of less than 0.1% by weight (See 29 C.F.R. §1910.1200(d)(4))
 - *or*
 - Any other non-PBT TRI chemical present at a concentration of less than 1% by weight
- The TRI *de minimis* level appears next to each chemical on the chemical list in Appendix II of the TRI *Reporting Forms and Instructions* (1.0, 0.1 or * for PBT chemicals where *de minimis* is not allowed (See 40 C.F.R. §372.28(b)))
- Reminder: Naphthalene *de minimis* changed from 1% to 0.1%, beginning RY 2004

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Notes:

Let's look at the de minimis exemption first. Under the de minimis exemption, the quantity of a non-PBT TRI chemical in a mixture or other trade name product is exempt from TRI if – in the case of an OSHA-defined carcinogen, the TRI chemical is present at a concentration less than 0.1% by weight. Or, in the case of a non-OSHA-defined carcinogen, at a concentration of less than 1% by weight. The de minimis concentrations are provided for each chemical on the TRI chemical list, which is Table II of the reporting forms and instructions. It is also available from the TRI assistance library and the TRI-ME reporting software. Recently, in the 2004 reporting year, the de minimis concentration for naphthalene changed from 1% to 0.1% as that chemical became an OSHA-defined carcinogen.

Slide 66

De Minimis Exemption

Duration: 00:01:10

TRI REPORTING REQUIREMENTS

De Minimis Exemption

HOW IT WORKS...

- *De minimis* exemption can apply to non-PBT chemicals:
 - In mixtures or trade name products processed or otherwise used
- Only 2 manufacturing activities:
 - Coincidentally manufactured as impurities that remain in products
 - Imported in mixtures or other trade name products
- *De minimis* exemption **DOES NOT** apply to:
 - Manufacturing chemicals (in most cases), including by-products manufactured coincidentally as a result of manufacturing, processing, otherwise use, or any waste management activities
 - Wastes received from off-site
 - PBT chemicals (except for supplier notification)

EPA TRI

Notes:

So how does the de minimis exemption work? De minimis exemption can apply to non-PBT chemicals that are in mixtures of trade name products that are processed or otherwise used. It can also apply to two manufacturing activities: coincidentally manufacturing when the TRI chemical remains as an impurity in the product; and importing the mixture containing the TRI chemical. In other words, the de minimis exemption does not apply to manufacturing of chemicals in most cases, including coincidentally manufacturing of TRI chemicals as by-products, which are removed from the process. The de minimis exemption also does not apply to wastes that are received from off-site. And it does not apply to PBT chemicals. PBTs, or persistent, bioaccumulative toxics, are a subset of the TRI chemicals comprised of 21 chemicals and chemical categories. PBT chemicals are discussed in detail in the Advanced Concepts Module.

Slide 67

PBT Chemicals and the De Minimis Exemption

Duration: 00:00:40

TRI REPORTING REQUIREMENTS

PBT Chemicals and the *De Minimis* Exemption

- PBT chemicals are not eligible for the *de minimis* exemption except for purposes of supplier notification.
 - Even though a supplier is not required to notify users of the presence of a PBT chemical if it is below the *de minimis* concentration, the user is still required to consider all quantities of PBT chemicals if known to be present!
- No other EPCRA section 313 exemptions were modified by the PBT rule.

EPA TRI

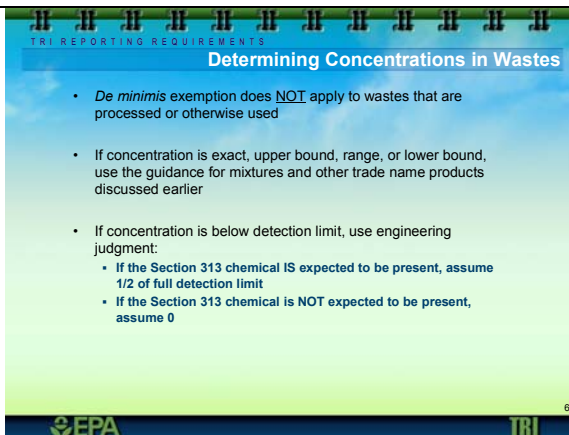
Notes:

The de minimis exemption cannot be used for PBT chemicals. As for the supplier notification requirements, suppliers are not required to notify users of the presence of a TRI chemical that is below the de minimis concentration. However, the users of the mixtures containing TRI chemicals are still required to consider all quantities of TRI chemicals known to be present. The de minimis exemption is the only exemption that does not apply to PBT chemicals. All of the other exemptions apply to both PBT and non-PBT chemicals.

Slide 68

Determining Concentrations in Wastes

Duration: 00:00:53



Determining Concentrations in Wastes

- *De minimis* exemption does **NOT** apply to wastes that are processed or otherwise used
- If concentration is exact, upper bound, range, or lower bound, use the guidance for mixtures and other trade name products discussed earlier
- If concentration is below detection limit, use engineering judgment:
 - If the Section 313 chemical **IS** expected to be present, assume 1/2 of full detection limit
 - If the Section 313 chemical is **NOT** expected to be present, assume 0

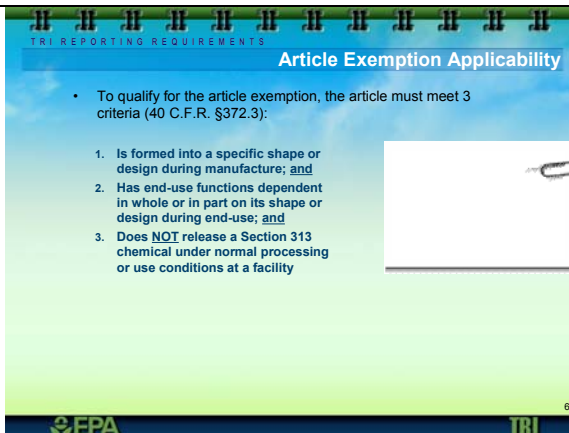
Notes:

The de minimis exemption does not apply to wastes that are processed or otherwise used. Facilities don't always know whether or not the TRI chemical is present in a mixture at a concentration that is above its de minimis. For example, in cases where the MSDS gives a range or an upper bound, use the guidance we discussed earlier for how to determine what concentration to use and compare that to the de minimis. In the situation where you know the TRI chemical is present but it's below the detection limit, use your engineering judgment. If the chemical is expected to be there, assume that it's at a level of half the full detection limit. If you don't expect the TRI chemical to be present, you can assume that its concentration is zero.

Slide 69

Article Exemption Applicability

Duration: 00:00:38



Article Exemption Applicability

- To qualify for the article exemption, the article must meet 3 criteria (40 C.F.R. §372.3):
 1. Is formed into a specific shape or design during manufacture; and
 2. Has end-use functions dependent in whole or in part on its shape or design during end-use; and
 3. Does **NOT** release a Section 313 chemical under normal processing or use conditions at a facility

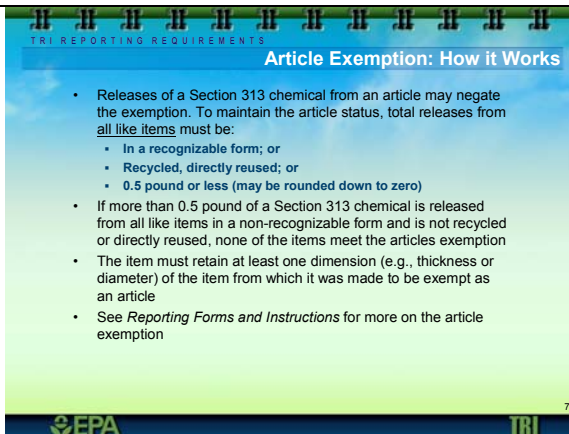
Notes:

Next, let's look at the articles exemption. The article exemption applies to TRI chemicals contained in articles. There are three criteria that must be met to be considered an article under TRI. First, an article is formed into a specific shape or design during its manufacture. Second, an article has an end-use function that is dependent in whole or in part on that shape or design. And, third, an article does not release a TRI chemical under normal processing or use conditions at the facility.

Slide 70

Article Exemption: How it Works

Duration: 00:01:14



Article Exemption: How it Works

- Releases of a Section 313 chemical from an article may negate the exemption. To maintain the article status, total releases from all like items must be:
 - In a recognizable form; or
 - Recycled, directly reused; or
 - 0.5 pound or less (may be rounded down to zero)
- If more than 0.5 pound of a Section 313 chemical is released from all like items in a non-recognizable form and is not recycled or directly reused, none of the items meet the article's exemption
- The item must retain at least one dimension (e.g., thickness or diameter) of the item from which it was made to be exempt as an article
- See *Reporting Forms and Instructions* for more on the article exemption

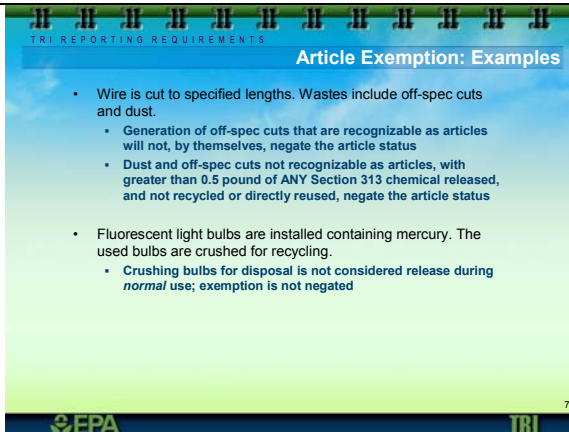
Notes:

Now let's look at how the article exemption works in more detail. If a TRI chemical is released from an article during its normal use, it very well may negate the article's exemption. In order to maintain the article's status, the total TRI chemicals released from all like articles or like items must be either: 1) in a recognizable form, or 2) recycled directly or directly reused, or 3) must be less than half a pound. In a recognizable form means that the releases from the article must still look like and be recognized as pieces of the article. If more than half a pound of TRI chemical is released from all the like items used at the facility in the course of the year, and the releases are not in a recognizable form, and they are not recycled or directly reused, none of the items meet the article exemption. Also, to maintain a recognizable form, the article must maintain its thickness or diameter to be considered exempt as an article.

Slide 71

Article Exemption: Examples

Duration: 00:01:27



Article Exemption: Examples

- Wire is cut to specified lengths. Wastes include off-spec cuts and dust.
 - Generation of off-spec cuts that are recognizable as articles will not, by themselves, negate the article status
 - Dust and off-spec cuts not recognizable as articles, with greater than 0.5 pound of ANY Section 313 chemical released, and not recycled or directly reused, negate the article status
- Fluorescent light bulbs are installed containing mercury. The used bulbs are crushed for recycling.
 - Crushing bulbs for disposal is not considered release during normal use; exemption is not negated

Notes:

Now let's look at an example where wire is cut into specified lengths. Wire itself would be considered an article, but in cutting the wire to the specified lengths, there is some waste of off-spec cuts and some dust. The generation of the off-spec cuts that are still recognizable as pieces of wire will not by themselves negate the article's status.

Quantities of the dust and off-spec cuts that are not recognizable as pieces of wire and that are greater than half a pound for any TRI chemical and not recycled or directly reused would negate the article status. Let's look at the example of fluorescent light bulbs which contain mercury, a TRI chemical. When the bulbs are no longer of use, they are crushed in an enclosed container for recycling. In this case the fluorescent bulbs would still be exempt. The normal use of the fluorescent bulbs does not release mercury. Crushing of the bulbs may release mercury, but that is not considered normal use of the bulb, so the exemption is not negated. Note that the mercury in the bulbs is exempt from TRI reporting, but other regulatory requirements associated with the proper management of waste fluorescent bulbs should be followed.

Slide 72

Article Exemption

Duration: 00:00:38

Article Exemption

- Article Exemption is often inappropriately used!
 - In many instances when metals are machined, cut, or ground, in any manner, the article exemption may not be applicable.
- The article exemption does NOT apply to the manufacture of articles.

Notes:

Facilities need to be careful that they do not inappropriately use the articles exemption. Because it only takes ½ pound of TRI chemical released or disposed of over the course of a year to negate the articles status, often when metals containing TRI chemicals are machined, cut, or ground, in any manner, the article exemption would not apply. Also the article exemption does not apply to the actual manufacturing of articles. The articles need to be brought in from a supplier and processed or otherwise used at the facility.

Slide 73

NAICS-Code Specific Exemptions

Duration: 00:00:31

NAICS-Code Specific Exemptions

- NAICS Codes 212111-212113: Coal mining extraction activities are exempt from threshold determinations and release reporting (40 C.F.R. §372.38(g))
 - Coal extraction: physical removal or exposure of ore, coal, minerals, waste rock, or overburden prior to beneficiation, and encompasses all extraction-related activities prior to beneficiation (40 C.F.R. §372.3)
- NAICS Codes 212221, 212222, 212231, 212234, 212299: Chemicals in metal mining overburden that are processed or otherwise used are specifically exempt from TRI reporting (40 C.F.R. §372.38(h))
 - Overburden: unconsolidated material that overlies a deposit of useful materials or ores (40 C.F.R. §372.3)

Notes:

There are also a number of industry-specific, or NAICS-code specific exemptions. The first one applies to certain coal mining activities that would be exempt from threshold determinations and release reporting. For coal mining, the exempt activities include the physical removal or exposure of the ore or coal prior to the beneficiation of the material. Similarly, certain metal mining activities are also exempt from TRI reporting.

Slide 74

Laboratory Activity Exemptions

Duration: 00:00:37

Laboratory Activity Exemptions

HOW IT WORKS...

- Section 313 chemicals used in these laboratory activities **ARE** exempt from threshold and release calculations (40 C.F.R. §372.38(d)):
 - Sampling and analysis
 - Research and development
 - Quality assurance
 - Quality control
- Section 313 chemicals used in these laboratory activities are **NOT** exempt:
 - Specialty chemical production
 - Pilot-scale plant operations
 - Activities not conducted in lab
 - Support services
 - Photo processing
 - Equipment maintenance/cleaning

Notes:

The next exemption is the laboratory activities exemption. TRI chemicals that are used in laboratories are exempt if they are used for sampling and analysis, research and development, quality assurance, or quality control. TRI chemicals used in laboratory activities are not exempt in the case of specialty chemical production, pilot-scale plant operation, activities that are not conducted in an actual lab, and support services such as photo processing or equipment maintenance and cleaning.

Slide 75
Motor Vehicle Maintenance Exemption
 Duration: 00:01:05

Motor Vehicle Maintenance Exemption

- Section 313 chemicals used to maintain vehicles operated by the facility are eligible for the exemption from threshold determinations (40 C.F.R. §372.38(c)(3))
 - "Otherwise use" exemption
- Motor vehicles include cars, trucks, missiles, spacecraft, tanks, and forklifts
- Motor vehicle maintenance includes:
 - Body repairs
 - Parts washing
 - Fueling and adding other fluids (e.g., ethylene glycol)

Note: This exemption does NOT apply to "manufacture" of Section 313 chemicals from combustion of fuels.

EPA TRI 75

Notes:

Next, let's look at the motor vehicles maintenance exemption. This is one of the 'otherwise use' exemptions. The TRI chemicals that are otherwise used to maintain vehicles that are operated by the facility would be eligible for this exemption. By motor vehicles, we are including cars, trucks, airplanes, space craft, military vehicles, and forklifts. Motor vehicle maintenance includes body repairs, painting, parts washing and plating, fueling, and adding other fluids to the vehicle. Note that this is an 'otherwise use' exemption, so it does not apply to the manufacture of TRI chemicals from the combustion of fuel in vehicles.

Also, if vehicles are a product of the facility and TRI chemicals are being added to that product, either as a fuel or in some other way, that would be considered processing and not 'otherwise use'. So those chemicals would not be exempt.

Slide 76
Routine Janitorial or Facility Grounds Maintenance Exemption
 Duration: 00:00:39

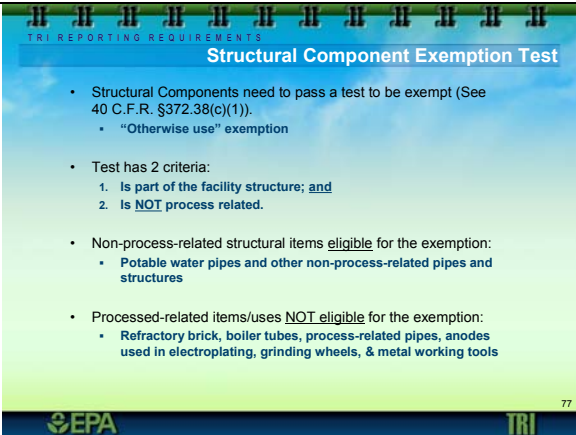
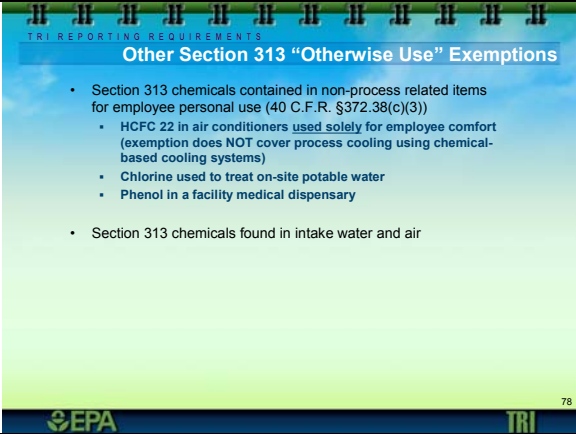

Routine Janitorial or Facility Grounds Maintenance Exemption

- Section 313 chemicals contained in products used for non-process related routine janitorial or facility grounds maintenance ARE eligible for the exemption from threshold determination (40 C.F.R. §372.38(c)(2)):
 - Phenol in bathroom disinfectants
 - Pesticides or fertilizers used on lawns
 - "Otherwise use" exemption
- Section 313 chemicals used in the following activities are NOT exempt
 - Facility equipment maintenance
 - Cleaning or maintenance activities that are directly associated with or integral to the production process at the facility

EPA TRI 76

Notes:

The routine janitorial or facility grounds maintenance exemption covers the otherwise use of TRI chemicals and products and materials used for cleaning facilities and maintaining their grounds. Examples include: pesticides, fertilizers, chemicals that are in cleaners that are used in non-process areas. TRI chemicals that are used for facility equipment maintenance or cleaning or maintenance activities that are directly associated with the production process would not be eligible for the routine janitorial or facility grounds maintenance exemption.

<p>Slide 77 🎧</p> <p>Structural Component Exemption Test</p> <p>Duration: 00:00:45</p>		<p>Notes:</p> <p>TRI chemicals otherwise used in certain structural components of the facility may also be exempt. First, such chemicals must meet the following requirements: the structural component cannot be part of the facility structure and it cannot be process related. So non-process-related structural items might include water pipes for potable water and any other non-process-related pipes and structures. Typical items that would not be eligible for the exemption – refractory brick, boiler tubes, process-related pipes, anodes used in electroplating, grinding wheels, metal working tools, and things of that nature.</p>
<p>Slide 78 🎧</p> <p>Other Section 313 “Otherwise Use” Exemptions</p> <p>Duration: 00:00:43</p>		<p>Notes:</p> <p>The remaining otherwise use exemptions apply to personal use of TRI chemicals and TRI chemicals found in intake water and air. With the personal use exemption, chemicals that are used for employee personal use such as refrigerants or air conditioners that are solely for employee comfort, disinfectants used in potable water such as chlorine or phenols used in the medical dispensary are exempt. Also TRI chemicals that are found in intake water and air used at a facility, as long as the facility is not responsible for them being in the intake water and air are also exempt under TRI.</p>
<p>Slide 79 🎧</p> <p>Section VI: TRI Form R</p> <p>Duration: 00:00:05</p>		<p>Notes:</p>

Slide 80

TRI Form R

Duration: 00:00:46

Overview of Form R

- Two principal types of information required
 - Facility-specific
 - Chemical-specific
- One form submitted to EPA and to the State/Tribe for each Section 313 chemical or chemical category exceeding applicable thresholds
- "Old Days" – Paper Form
- "Now" – Electronic Filing (*TRI-ME* and *TRI-MEweb*)

Notes:

In the next part of this module, we'll talk about the TRI Form R. Assuming your facility has exceeded an activity threshold for a TRI chemical, it may be required to complete a TRI Form R. For each TRI chemical for which an activity threshold is exceeded, a form would be required to be submitted to the EPA and to the designated state or tribal authority. In past years, paper forms were used for this reporting. Currently, most TRI forms are submitted electronically. And most are submitted using the TRI-ME or TRI-MEweb software. Relatively few facilities still fill out the paper form.

Slide 81

Form R Content

Duration: 00:01:12

Form R Content

Part I	Key Notes / Issues to watch for
Section 1: Reporting Year	
Section 2: Trade Secret Information	
Section 3: Certification	TRI-ME and electronic submittal automatically initiate certification.
Section 4: Facility Identification	
Section 5: Parent Company Info	Ultimate U.S. Parent Company.

Part II	Key Notes / Issues to watch for
Section 1: Toxic Chemical ID	
Section 2: Mixture Component ID	
Section 3: Activities & Uses	
Section 4: Max Amt on site for CY	Not the same as EPCRA Tier II reporting.
Section 5: On-site Releases	Report TOTAL releases of each chemical to each medium on-site. Range codes allowed for non-PBT's. Not allowed for PBT's.
Section 6: Off-site Releases	Report only total quantity of chemical, NOT entire waste. Range codes allowed for non-PBT's. Not allowed for PBT's.
Section 7: On-site Waste Treatment, Energy Recovery, Recycling Processes	No quantities needed, but codes for waste management activities. Codes are listed in software and in reporting instruction book.
Section 8: Source Reduction and Recycling Activities	Completed for current year, previous year, and next two years.

☐ The "Meat" of TRI Reporting = the "chemical releases"

Notes:

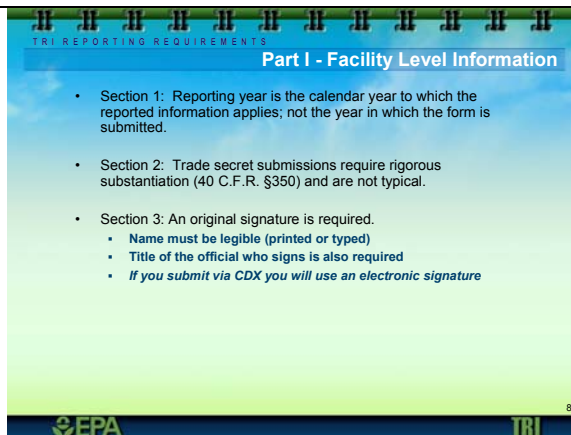
Let's look a little closer at the TRI Form R. The TRI Form R is comprised of two main parts. The first part contains facility-specific information about your facility. There are five sections for reporting information about your facility. The second part covers information about the chemical for which your facility is reporting. There are eight sections in part two. The first four sections identify the chemical, how it is used at the facility, and the maximum amount on site. The next four sections, are what we call the meat of the TRI reporting, and this is where facilities report the actual quantities of the TRI chemicals that were managed as waste.

We will now look at each of these sections in more detail. Note that much more detail and instructions for completing each section of the TRI Form R can be found in the "Reporting Forms and Instructions" document available from the TRI program website and through the TRI assistance library.

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Part I - Facility Level Information

Duration: 00:01:41



TRI REPORTING REQUIREMENTS

Part I - Facility Level Information

- Section 1: Reporting year is the calendar year to which the reported information applies; not the year in which the form is submitted.
- Section 2: Trade secret submissions require rigorous substantiation (40 C.F.R. §350) and are not typical.
- Section 3: An original signature is required.
 - Name must be legible (printed or typed)
 - Title of the official who signs is also required
 - If you submit via CDX you will use an electronic signature

EPA TRI 82

Notes:

Part one of the TRI Form R is comprised of five sections covering information about the facility.

In section one, facilities report the calendar year that the TRI form covers. Note that this is not the year in which the form is submitted.

In section two, facilities indicate whether or not they are claiming trade secret information in this report. In some cases, facilities may feel that reporting on the TRI chemicals that they use and manage as waste could put them at a competitive disadvantage. If facilities can substantiate this claim, there is a process that allows them to submit two forms to TRI – one that includes the actual chemical name, and one in which the actual TRI chemical name is replaced with a generic descriptor. Only the information in the second form is made available to the public. Before claiming a trade secret, facilities must first obtain approval from the TRI program. More information on the approval process can be obtained from the “Reporting Forms and Instructions”.

Section three is where the form is signed for certification. Signers are certifying that the information contained on the form is correct to the best of their knowledge. As described earlier, when submitting electronically using the TRI-ME desktop and TRI-ME web applications, the certification is completed and signed electronically via EPA’s Central Data Exchange.

Slide 83

Facility Identification

Duration: 00:01:29

TRI REPORTING REQUIREMENTS

Facility Identification

- Section 4.1
 - All parts of the facility name and address are essential
 - Mailing address required if different from street address
 - TRI facility identification number (if a form was filed in a previous reporting year) or "New Facility" (if reporting for the first time)
 - All establishments at one facility should use the same TRI facility identification number (if reporting separately)
 - Federal facilities
 - Enter name of Federal department or agency standard acronym followed by the site name
 - Standard facility names are available through the Facility Registry System (<http://www.epa.gov/enviro/html/fri/fz.html>)
- Section 4.2
 - Specify whether the form covers all or part of the facility
 - Federal facilities and GOCOs also check either "c" or "d," but not both

EPA TRI 83

Notes:

Section four of Part one of the Form R contains facility name and location information. Section 4.1 includes name, address, TRI Identification number. If your facility has submitted a form at any time in the past, it will have a TRI ID. TRI IDs stay with a facility even if the facility ownership changes. Facilities that have never filed a TRI report in the past, should enter "New Facility" in place of a TRI ID, and a TRI ID will be assigned by EPA. Federal facilities' names should include the federal department or agency followed by the site name. If you are unsure of your facility's name or whether or not it has filed a TRI form in the past, you can go to the website shown here to search EPA's Facility Registry System.

In Section 4.2, facilities specify whether or not the Form covers the entire facility, or if it only covers part of the facility, with the rest of the TRI reporting for the facility being covered in other form submissions. Also, in this section, facilities indicate whether they are a federal facility or a "Government Owned Contractor Operated" facility.

Slide 84

Facility Identification (continued)

Duration: 00:01:07

TRI REPORTING REQUIREMENTS

Facility Identification (continued)

- Sections 4.3 and 4.4
 - List name, phone number, and email
 - Technical contact - should be able to explain data to EPA
 - EPA encourages facilities to provide an email address for the technical contact
 - Note: Technical contact information is not made available to the public
 - Public contact - should be able to represent the facility's data to the public
- Section 4.5
 - Enter covered 6-digit NAICS code(s)
 - Enter primary NAICS code in first box (a.)
 - Enter other covered NAICS codes in decreasing order of significance
 - www.naics.com/search.htm
- Section 4.6: Dun and Bradstreet number(s)

EPA TRI 84

Notes:

Sections 4.3 and 4.4 of Part one cover technical and public contact information, respectively. A technical contact is a person who can answer technical questions from EPA and states about the TRI submittal. This information is not made available to the public. The public contact is a person who can answer inquiries from the public about the TRI data.

In Section 4.5, facilities enter the industry codes that best represent their operations. As previously discussed, in reporting year 2006, the TRI program switched from the SIC code system to NAICS codes. NAICS codes can be found in the website shown here. Remember that the primary NAICS code is the code that represents the largest portion of the facility's operations as defined by "value added".

In Section 4.6, enter the Dun and Bradstreet number for the facility.

Slide 85

Parent Company Information

Duration: 00:00:23

TRI REPORTING REQUIREMENTS

Parent Company Information

- Sections 5.1 and 5.2: Name of Parent Company and Parent Company D & B Number
 - Private-sector and GOCO facilities:
 - Enter complete name and Dun & Bradstreet number of parent company
 - Federal facilities:
 - Enter the complete name of department or agency for parent company (e.g., U.S. Department of Interior)
 - Check "NA" for Dun & Bradstreet number of parent company
 - To identify the correct parent company: go up to the highest level of ownership within the U.S.

EPA TRI 85

Notes:

In section five, private sector facilities report information on their parent company, including its name and Dun and Bradstreet number. The parent company is the highest level of ownership within the United States. Federal facilities enter the highest level department or agency and check "NA" for Dun and Bradstreet number.

Slide 86

Part II - Chemical-Specific information

Duration: 00:01:01

TRI REPORTING REQUIREMENTS

Part II - Chemical-Specific information

- Sections 1 and 2: Toxic Chemical or Mixture Identity
- Complete either Sections 1.1 & 1.2 or Section 1.3 or Section 2
 - 1.1 or 1.2: Enter CAS number or category code and name of Section 313 chemical or chemical category (except on "sanitized" form)
 - 1.3: Enter generic name only if claiming Section 313 chemical name as a trade secret (40 C.F.R. 350)
 - 2.1: If supplier claims trade secret, report generic name by supplier

EPA TRI 86

Notes:

Part two of the Form R is for chemical specific information. In section one, facilities identify the TRI chemicals on which they are reporting. In section 1.1, facilities enter the chemical name and, and section 1.2, the "chemical abstract service" number or the TRI chemical category code. Section 1.3, is only completed by those facilities that are claiming a trade secret. In the public version of the TRI Form R, the facility enters the generic descriptive for the type of chemical in section 1.3. In some cases, the facility's chemical supplier may have claimed a trade secret for a particular TRI chemical and the facility does not know the actual name of the TRI chemical for which they are submitting a report. In this scenario, the facility enters the generic descriptive provided to them in Section 2.

Slide 87

Activities and Uses

Duration: 00:00:10

TRI REPORTING REQUIREMENTS

Activities and Uses

- Section 3: Specify use(s) of the Section 313 chemical (e.g., manufacture, process, or otherwise use)
 - Report only activities taking place at reporting facility
 - Check all applicable boxes

SECTION 3. ACTIVITIES AND USES OF THE TOXIC CHEMICAL AT THE FACILITY (Important: Check all that apply)		
3.1 Manufacture the toxic chemical:	3.2 Process the toxic chemical:	3.3 Otherwise use the toxic chemical:
a. <input type="checkbox"/> Produce b. <input type="checkbox"/> Import		
If produce or import:		
c. <input type="checkbox"/> For on-site use/processing	a. <input type="checkbox"/> As a reactant	a. <input type="checkbox"/> As a chemical processing aid
d. <input type="checkbox"/> For sale/distribution	b. <input type="checkbox"/> As a formulation component	b. <input type="checkbox"/> As a manufacturing aid
e. <input type="checkbox"/> As a byproduct	c. <input type="checkbox"/> As an article component	c. <input type="checkbox"/> Ancillary or other use
f. <input type="checkbox"/> As an impurity	d. <input type="checkbox"/> Repackaging	
	e. <input type="checkbox"/> As an impurity	

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Notes:

In section three, facilities report the activities and uses of the TRI chemical at the facility. Be sure to check all applicable boxes.

Slide 88

Maximum On-Site Amount

Duration: 00:00:49

TRI REPORTING REQUIREMENTS

Maximum On-Site Amount

- Section 4: Insert appropriate code from instructions indicating the maximum quantity on-site during the reporting year.
- Use maximum total (non-exempt) amount present at one time during reporting year, even if the Section 313 chemical is present at more than one location at the facility
 - Based on amount in storage, process, and wastes
 - May not be the same as Tier II maximum amount on site
 - Tier II is usually by mixtures, Form R is chemical-specific
 - Tier II excludes hazardous wastes, Form R does not

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Notes:

In section four, facilities report the maximum quantity of the TRI chemical that was on site at any one time during the reporting year. The quantity is reported by entering a code representing a range of pounds of the chemical. The codes are available from the "Reporting Forms and Instructions" document and from the TRI-ME reporting software. Note that this quantity is comprehensive of all locations and uses of the chemical at the facility including quantities in storage, in the process stream, and in wastes. This is different from Tier two maximum amount on site which includes the weight of the entire mixture and does not include quantities in hazardous wastes.

Slide 89

Quantity Entering Each Medium

Duration: 00:00:39

TRI REPORTING REQUIREMENTS

Quantity Entering Each Medium

- Section 5: Report total releases of the Section 313 chemical to each environmental medium on-site (air, water, land)
- In column A, Total Release, report total quantity
 - A range code can be used for non-PBT Section 313 chemical quantities less than 1,000 pounds
 - A = 1 - 10 pounds
 - B = 11 - 499 pounds
 - C = 500 - 999 pounds

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Notes:

In Section five, which is comprised of a number of subsections, facilities report the quantities of the TRI chemical that are released to each environmental medium on-site. In sections 5 and 6 of the TRI Form R, facilities have the option of reporting one of three "ranges codes" in place of actual quantities of chemicals, if the quantity is less than 1,000 pounds, AND if the chemical is not a PBT chemical. Range codes cannot be used for PBT chemicals, instead the actual quantity must be entered for PBT chemicals.

Slide 90

Basis of Estimate Codes

Duration: 00:01:34

Basis of Estimate Codes

- One of the following RY2007 updated "Basis of Estimate" codes must be listed on the Form R for each release and waste management quantity reported:
 - Continuous monitoring (M1)
 - Periodic or random monitoring (M2)
 - Mass balance calculation (C)
 - Published emissions factors (E1)
 - Site-specific emissions factors (E2)
 - Engineering calculations (O)
 - Everything NOT M1, M2, C, E1 or E2 above, such as:
 - Best engineering judgment
 - Equipment efficiency specs
- Use the code on the Form R for the method used to estimate the largest portion of the release

Notes:

For each chemical quantity entered in Sections 5 and 6 of the Form R, facilities must also indicate how the quantity was estimated by entering a "basis of estimate" code. Note that beginning in RY2007, the number of basis of estimates codes has increased to the six shown here. Is the estimate based on data from a continuous monitoring system? If so, enter a Basis of Estimate code of M1. Enter "M2" if the estimate is based upon periodic or random monitoring. Is the estimate based on a mass balance calculation? That would be a Basis of Estimate Code of C. If the quantity is based on a published emission factor, then enter "E1" as the Basis of Estimate code. E2 is for site-specific emissions factors that are non-published, that were perhaps developed through in-house testing, or were provided by the vendor of your process or pollution control equipment. The last code, "O", is for "other" and is used for engineering calculations. O is also any other method that is not covered by the other codes.

In some cases, the quantity entered on the TRI Form could be based on multiple estimation techniques. In these cases, enter the basis of estimate code that represents the largest portion of the estimate.

Slide 91

Fugitive or Non-Point Air Emissions

Duration: 00:01:12

Fugitive or Non-Point Air Emissions

- Section 5.1 Enter total fugitive releases of the Section 313 chemical in column A, including leaks, evaporative losses, building ventilation, or other non-point air emissions
- Example Using a Mass Balance Basis of Estimate (C):
 - 5,000 lbs of a volatile solvent are added during the year as part of the manufacture of a liquid adhesive. 4,950 lbs of the solvent are contained in the final liquid adhesive product.
 - Input (5,000 lbs) = Output (4,950 lbs) + Air Loss (50 lbs)
 - Fugitive air emissions from this process = 50 lbs

Law of Mass Balance:
What Goes In = What Comes Out

Notes:

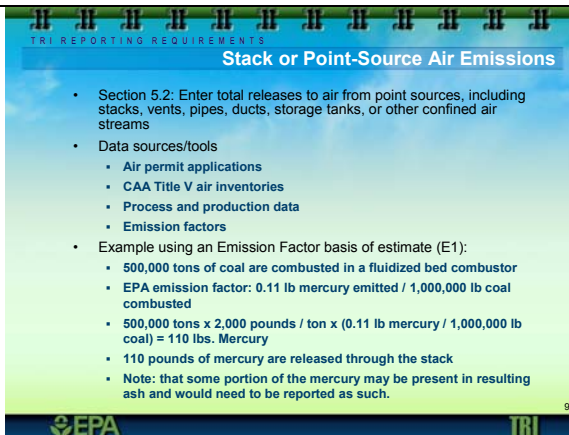
Enter the quantity of the TRI chemical that is released to the air from fugitive and non-point sources in Section 5.1 of Part two of the Form R. Fugitive and non-point emissions include leaks, evaporative losses, building ventilation, and any other air emissions that cannot be traced to a discrete point. As with all estimates entered in Sections 5 and 6, enter the basis of estimate code that best represents the estimation technique used.

In the example shown, a facility knows that it used 5,000 pounds of a volatile solvent during the reporting year. They also know that 4,950 pounds of the solvent were contained in the adhesive product that they manufactured. Using a simple mass balance calculation they are able to determine that 50 pounds of the TRI chemical were released to the air through fugitive emissions. The facility then enters 50 pounds in Section 5.1 along with a basis of estimate code of "C".

Slide 92

Stack or Point-Source Air Emissions

Duration: 00:01:01



Stack or Point-Source Air Emissions

- Section 5.2: Enter total releases to air from point sources, including stacks, vents, pipes, ducts, storage tanks, or other confined air streams
- Data sources/tools
 - Air permit applications
 - CAA Title V air inventories
 - Process and production data
 - Emission factors
- Example using an Emission Factor basis of estimate (E1):
 - 500,000 tons of coal are combusted in a fluidized bed combustor
 - EPA emission factor: 0.11 lb mercury emitted / 1,000,000 lb coal combusted
 - 500,000 tons x 2,000 pounds / ton x (0.11 lb mercury / 1,000,000 lb coal) = 110 lbs. Mercury
 - 110 pounds of mercury are released through the stack
 - Note: that some portion of the mercury may be present in resulting ash and would need to be reported as such.

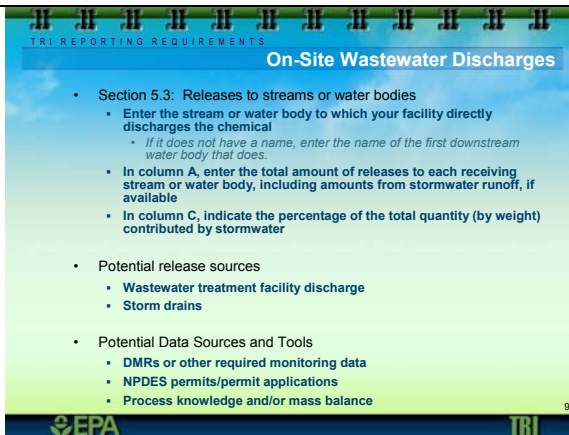
Notes:

In section 5.2, enter the quantity of the TRI chemical that was released to the air via stacks or other point sources such as vents, pipes, ducts, storage tanks, and any other confined stream. In some cases these emissions may already be monitored or estimated for air permits or other regulatory requirements. In other cases they can be estimated from emissions factors and production data. An example of an estimate based on a published emissions factor is shown here. A facility combusting 500,000 tons of coal in a fluidized bed combustor obtained a published emissions factor for mercury in such a system. Using the emission factor, they were able to determine that 110 pounds of mercury was released through the stack, which they entered on the TRI form along with a basis of estimate code of "E1".

Slide 93

On-Site Wastewater Discharges

Duration: 00:01:16



On-Site Wastewater Discharges

- Section 5.3: Releases to streams or water bodies
 - Enter the stream or water body to which your facility directly discharges the chemical
 - If it does not have a name, enter the name of the first downstream water body that does.
 - In column A, enter the total amount of releases to each receiving stream or water body, including amounts from stormwater runoff, if available
 - In column C, indicate the percentage of the total quantity (by weight) contributed by stormwater
- Potential release sources
 - Wastewater treatment facility discharge
 - Storm drains
- Potential Data Sources and Tools
 - DMRs or other required monitoring data
 - NPDES permits/permit applications
 - Process knowledge and/or mass balance

Notes:

Wastewater discharges are reported in two places on your form R. In Section 5.3 facilities report releases directly discharged to a stream or water body. Often these are regulated and monitored as part of an NPDES permit. Facilities enter the name of the water body if it has a name. If it does not have a name, then report the name of the nearest downstream water body that does have a name.

Be aware that the quantity of TRI chemical reported in Column A of section 5.3 should also include any stormwater runoff containing the TRI chemical. In column C, facilities indicate the percent of the total reported in Column A that can be attributed to the stormwater releases.

The other place on the Form R where wastewater discharges are reported cover discharges to a POTW. Because the POTW will conduct further waste management on the discharged chemicals, these discharges are considered offsite transfers, so they are reported Section 6 of Form R.

Slide 94

Calculating Wastewater Discharges

Duration: 00:01:58

TRI REPORTING REQUIREMENTS

Calculating Wastewater Discharges

- Calculate the yearly pounds of methanol discharged using the following data concerning wastewater discharges of methanol:



Date	Conc. (mg/l)	Flow (MGD)	Amt. (lbs/day)
3/1	1.0	1.0	8.33
9/8	0.2	0.2	0.33

EPA way Average = **4.33**

Other way $0.6 \text{ mg/l} \times 0.6 \text{ MGD} \times 8.33 = \mathbf{3.00}$

MGD = million gallons per day 1 mg/l = 8.33 lbs/million gal

- Basis of Estimate Code: M2

Notes:

Here is an example calculation for wastewater discharges using already existing and available monitoring data. This example is for methanol discharges, where this facility collected samples twice during the reporting year. The first sample was taken on March 1st, when the chemical was released at a concentration of 1.0 milligrams per liter with a flow rate of 1.0 million gallons per day. Converting milligrams per liter and million gallons per day into pounds per day results in 8.33 pounds per day by applying the appropriate conversion factors. Their second sample was taken on September 8th, where they measured the chemical at a concentration of 0.2 milligrams per liter, at a flow rate of 0.2 million gallons per day. Calculating that with the appropriate conversion factors again, comes out to 0.33 pounds per day. The two samples of 8.33 and 0.33 pounds/day are averaged to get 4.33 pounds per day.

The number that goes on the Form R is not in pounds per day, but in pounds for the reporting year. So, this quantity must be multiplied by the operating days, say 365 days, to get the total pounds per year.

The second method shown, labeled “other way,” shows a method where the two concentrations are averaged and then separately the two flow rates are averaged to calculate pounds per day. This method is not as accurate because the concentration and the flow rate specific to each sample should stay together. Note that the basis of estimate code for this calculation is “M2” for periodic monitoring.

Slide 95

On-Site Injection Wells

Duration: 00:00:35

TRI REPORTING REQUIREMENTS

On-Site Injection Wells

- Section 5.4.1 Underground injection to Class I wells
 - Enter total amount of Section 313 chemical injected into Class I wells at facility in column A and basis of estimate code in column B
- Section 5.4.2 Underground injection to Class II - V wells
 - Enter total amount of Section 313 chemical injected into Class II - V wells at facility in column A and basis of estimate code in column B

SECTION 5. QUANTITY OF THE TOXIC CHEMICAL ENTERING EACH ENVIRONMENTAL MEDIUM ONSITE (continued)			
	NA	A. Total Release (pounds/year)* (enter range code** or estimate)	B. Basis of Estimate (enter code)
5.4.1	Underground injections on-site to Class I Wells	<input type="checkbox"/>	
5.4.2	Underground injections on-site to Class II-V Wells	<input type="checkbox"/>	

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Notes:

Section 5.4 of Form R covers releases of the TRI chemical to underground injection wells. Underground injection wells are classified and regulated under the Safe Drinking Water Act. Quantities are entered for Class one wells in section 5.4.1 and for Class two through five wells in section 5.4.2. Facilities that do not have underground injection wells should check "NA" in this section.

Slide 96

Releases to Land On-Site

Duration: 00:00:44

TRI REPORTING REQUIREMENTS

Releases to Land On-Site

- Section 5.5: Quantity of the toxic chemical entering each environmental medium onsite
- Quantities released to air or water during the reporting year of the initial release to land (e.g., volatilization from surface impoundments) are not included here

SECTION 5. QUANTITY OF THE TOXIC CHEMICAL ENTERING EACH ENVIRONMENTAL MEDIUM ONSITE (continued)			
	NA	A. Total Release (pounds/year)* (enter range code** or estimate)**	B. Basis of Estimate (enter code)
5.4.1	Underground injections on-site to Class I Wells	<input type="checkbox"/>	
5.4.2	Underground injections on-site to Class II-V Wells	<input type="checkbox"/>	
5.5	Disposal to land onsite		
5.5.1A	RCRA Subtitle C landfills	<input type="checkbox"/>	
5.5.1B	Other landfills	<input type="checkbox"/>	
5.5.2	Land treatment/application	<input type="checkbox"/>	
5.5.3A	RCRA Subtitle C surface impoundments	<input type="checkbox"/>	
5.5.3B	Other surface impoundments	<input type="checkbox"/>	
5.5.4	Other disposal	<input type="checkbox"/>	

* Other disposal (5.5.4) includes spills or leaks to land

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Notes:

In section 5.5 of Form R, facilities report the quantity of the chemical released to the land via onsite RCRA subtitle C landfills, other landfills, land treatment or land farming, RCRA Subtitle C surface impoundments, other surface impoundments, and other disposal. "Other disposal" includes any spills or leaks to land. Note that if a portion of the TRI chemical that is disposed of to land onsite volatilizes to the air or washes to a water body during the reporting year, that quantity is not reported here, but in the section most appropriate for that medium.

Slide 97

Off-Site Transfers

Duration: 00:00:42

TRI REPORTING REQUIREMENTS

Off-Site Transfers

- Includes both off-site location information and quantities of Section 313 chemicals transferred to off-site locations
- Report quantities of a Section 313 chemical sent off-site to any POTW or other location for recycling, energy recovery, waste treatment, or disposal
- Report only total quantity of a Section 313 chemical transferred off-site, not the quantity of entire waste stream mixture
- In Sections 6.1 and 6.2, Total Transfers, report total quantity
 - A range code can be used for non-PBT Section 313 chemical quantities less than 1,000 pounds
 - A = 1 - 10 pounds
 - B = 11 - 499 pounds
 - C = 500 - 999 pounds

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Notes:

Section six of Form R covers off-site transfers of the TRI chemical. These include any transfers of the TRI chemical to another facility for the purpose of waste management including off-site waste treatment, recycling, energy recovery, or disposal. As in Section 5, any quantity reported in Section 6 that is under 1,000 pounds AND that is for a non-PBT chemical can instead be represented by one of the range codes shown here. Also, as in Section 5, basis of estimate codes are required for each quantity entered.

Slide 98

Transfers to POTWs

Duration: 00:00:56

- Section 6.1 Discharges to publicly owned treatment works
 - Section 6.1A: Enter total quantity of the Section 313 chemical transferred to all POTWs and basis of estimate
 - Section 6.1B: POTW name and location for each POTW
- Example using an Engineering Calculations basis of estimate (O):
 - A wet grinding process generates wastewater with 300 lbs of lead (contained in particulates) during the year. This wastewater undergoes on-site filtration prior to being sent to the POTW. Manuals from the filter equipment vendor indicate a 95% removal efficiency for particulates of this size.
 - $300 \times 0.95 = 285$ lbs removed from the wastewater
 - $300 - 285 = 15$ pounds remaining in the wastewater after filtration
 - 15 pounds of lead are transferred off-site to the POTW

Notes:

Section 6.1 of Form R is specifically for TRI chemical that is transferred to a publicly owned treatment works, or POTW. Both the total quantity of the amount transferred and the name of the POTW must be entered. In the example shown here, a facility used engineering calculations to determine that it generated wastewater containing 300 pounds of lead particulates during the reporting year. Before being discharged to the POTW, the wastewater underwent a filtration step that was thought to have a 95 percent removal efficiency for this size of particulates. Therefore, the quantity of lead reported as transferred to the POTW is 15 pounds and the basis of estimate code for this combination of estimation techniques is "O".

Slide 99

Other Transfers

Duration: 00:01:04

- Section 6.2 Transfers to other off-site locations
 - Include name, address, and EPA identification (RCRA ID) number of the receiving facility
 - Enter quantity, basis of estimate, and M code for each different waste management activity (waste treatment, disposal, recycling, and energy recovery)
- Data/tools
 - Waste manifests and vendor receipts
 - RCRA reports
 - Waste characterization - analyses, profiles

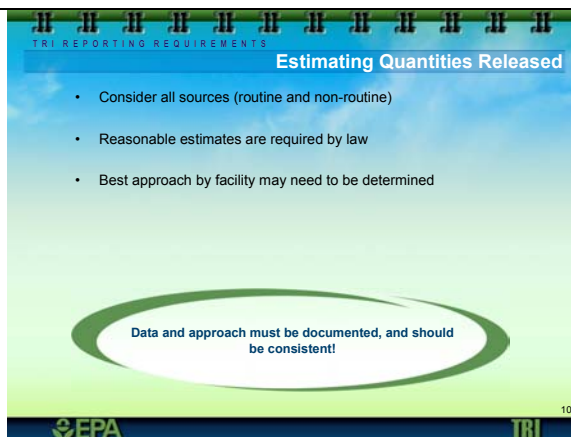
Notes:

Section 6.2 covers all other transfers of the TRI chemical off-site for waste management. The name, address and EPA ID, if applicable) of the facility receiving the TRI chemical is entered. For each off-site location, the quantity and basis of estimate code associated with each waste management activity are entered. The types of waste management activities are specified using the appropriate "M code" for each activity. The list of "M codes" are available in the "Reporting Forms and Instructions" document as well in the TRI-ME electronic reporting applications. The quantities of TRI chemical sent off-site to be managed as waste are often recorded by facilities as part of their regulatory requirements and recordkeeping systems. Facilities should take advantage of existing sources of information to assist with developing their estimates for this and other sections of the TRI form R.

Slide 100

Estimating Quantities Released

Duration: 00:01:03



- Consider all sources (routine and non-routine)
- Reasonable estimates are required by law
- Best approach by facility may need to be determined

Data and approach must be documented, and should be consistent!

Notes:

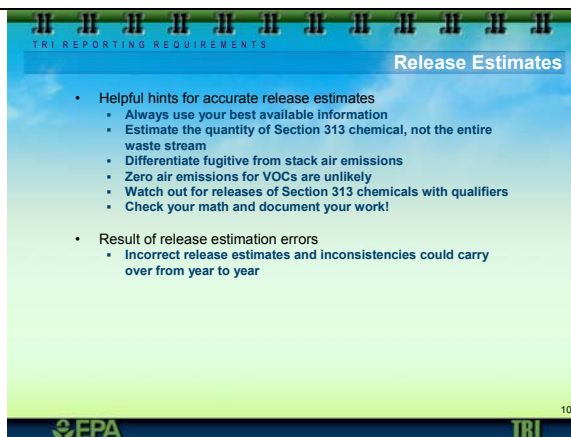
When estimating release and waste management quantities for sections 5 and 6 of Part two of the Form R, be sure to consider all sources and uses of the TRI chemical, not just your main feedstocks. For example, consider chemicals that are used to clean production equipment, fuels, maintenance chemicals, catalysts, and lubricants for machinery. These all could be sources of TRI chemicals.

Reasonable estimates are required by law. However, the best approach is usually facility-specific. The data and approach must be documented and should be consistent. Facilities are required to use their best available information. While measuring and monitoring are not required by TRI, it may be that existing measurements and monitoring data are the best available information. Facilities need to determine the best reasonable approach to their estimates.

Slide 101

Release Estimates

Duration: 00:01:23



- Helpful hints for accurate release estimates
 - Always use your best available information
 - Estimate the quantity of Section 313 chemical, not the entire waste stream
 - Differentiate fugitive from stack air emissions
 - Zero air emissions for VOCs are unlikely
 - Watch out for releases of Section 313 chemicals with qualifiers
 - Check your math and document your work!
- Result of release estimation errors
 - Incorrect release estimates and inconsistencies could carry over from year to year

Notes:

Here are a few helpful hints for estimating release and waste management quantities reported on the Form R. First, consider all sources of information and use the best available information for release and waste management estimates.

Be sure to estimate the quantity of the TRI chemical and not the entire waste stream. For example, when using data from a waste manifest that shows the weight of the entire waste mixture sent off-site, be sure to base release and waste management estimates on only the amount of the TRI chemical in that waste mixture.

Be sure to differentiate between your fugitive and your stack air emissions.

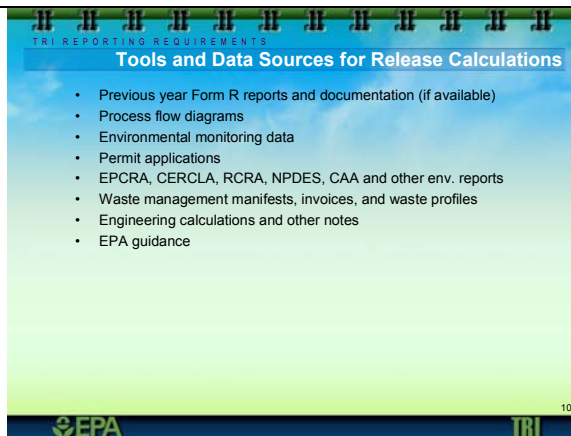
When reporting for a VOC, or volatile organic compound, be sure to estimate fugitive losses of the chemical – it is unlikely to have zero fugitive air emissions. Pay attention to the TRI chemical qualifiers and remember that the form of the chemical described in the qualifier is the only form that needs to be considered for TRI.

Also, always check your math and document your work. Be aware that errors can carry over from year to year.

Slide 102

Tools and Data Sources for Release Calculations

Duration: 00:01:14



TRI REPORTING REQUIREMENTS

Tools and Data Sources for Release Calculations

- Previous year Form R reports and documentation (if available)
- Process flow diagrams
- Environmental monitoring data
- Permit applications
- EPCRA, CERCLA, RCRA, NPDES, CAA and other env. reports
- Waste management manifests, invoices, and waste profiles
- Engineering calculations and other notes
- EPA guidance

EPA TRI 102

Notes:

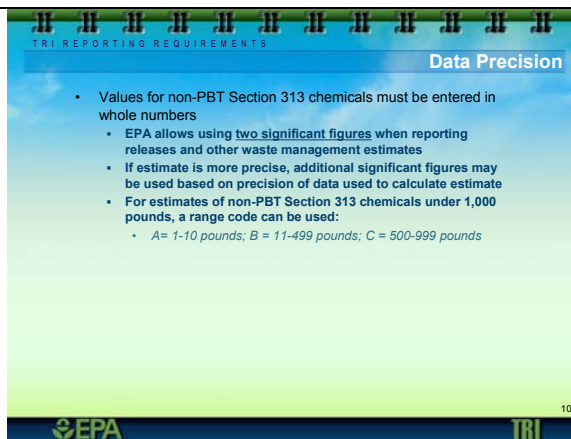
Where should facilities get the information to calculate their releases and waste management quantities for Form R? A few sources are listed here. Previous year Form R reports and documentation are a starting point for many TRI filers. Process flow diagrams, monitoring data – again, facilities are not required to collect it for TRI, but many facilities have already collected it for other purposes. Environmental permit applications are another source – often, permit applications require extensive data collection that may be useful for TRI reporting.

Other environmental reports may be helpful sources – for example, some states require pollution prevention reports. Some facilities must complete RCRA biennial reports. Some facilities conduct wastewater monitoring and submit discharge monitoring reports that may include TRI chemicals. Be sure to look across media for potential sources. Waste management manifests can be a good source of information for estimating the quantity of a chemical sent offsite.

Slide 103

Data Precision

Duration: 00:00:60



TRI REPORTING REQUIREMENTS

Data Precision

- Values for non-PBT Section 313 chemicals must be entered in whole numbers
 - EPA allows using two significant figures when reporting releases and other waste management estimates
 - If estimate is more precise, additional significant figures may be used based on precision of data used to calculate estimate
 - For estimates of non-PBT Section 313 chemicals under 1,000 pounds, a range code can be used:
 - A = 1-10 pounds; B = 11-499 pounds; C = 500-999 pounds

EPA TRI 103

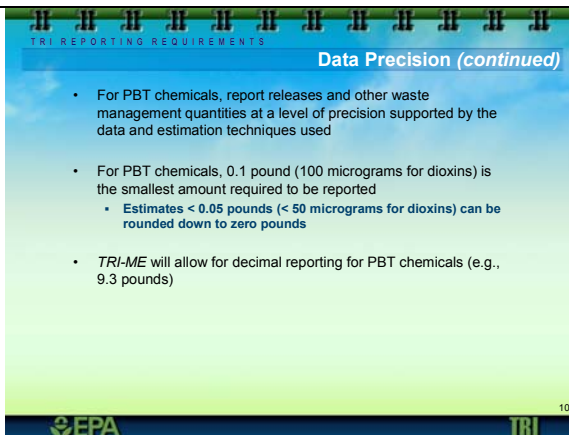
Notes:

Be as precise as possible when reporting release and waste management quantities. For non-PBT chemicals, facilities report release and waste management quantities in whole numbers. In other words, no decimal numbers for non-PBT chemicals. For non-PBT chemicals, quantities of a half pound or less can be rounded down to zero. In general, EPA requests two significant figures, if available. If your estimate is more precise, additional figures should be used. However, the level of precision reported should be based upon the precision of the underlying data used in the calculations. However, for non-PBT chemicals, range code reporting allowed in sections 5 and 6 for quantities less than 1,000 pounds. Range codes cannot be used for PBT chemicals.

Slide 104

Data Precision (continued)

Duration: 00:00:59



Data Precision (continued)

- For PBT chemicals, report releases and other waste management quantities at a level of precision supported by the data and estimation techniques used
- For PBT chemicals, 0.1 pound (100 micrograms for dioxins) is the smallest amount required to be reported
 - Estimates < 0.05 pounds (< 50 micrograms for dioxins) can be rounded down to zero pounds
- TRI-ME will allow for decimal reporting for PBT chemicals (e.g., 9.3 pounds)

Notes:

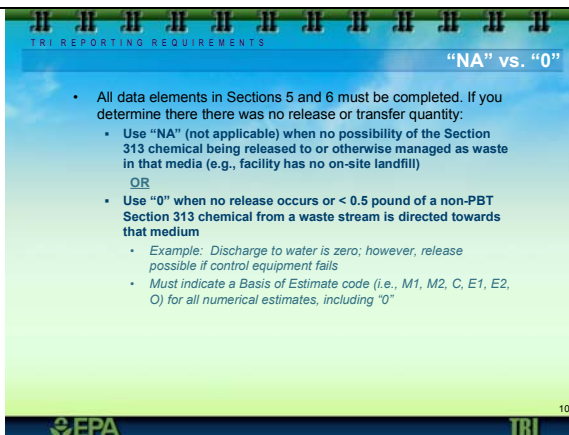
Data precision requirements are different for PBT chemicals, because of the much lower thresholds associated with these chemicals. While non-PBT chemicals are reported to the nearest whole number, for PBT chemicals, facilities report to the nearest 10th of a pound. The exception is for dioxin, where quantities should be reported to the nearest 100 micrograms. For PBT chemicals, reported quantities can be rounded down to zero if less than .05 pounds. Quantities of 50 micrograms or less of dioxin can be rounded down to zero.

When using the TRI-ME desktop or TRI-ME web reporting applications, the systems recognize the chemicals as PBT or non-PBT and will allow decimal reporting for PBT chemicals and not for non-PBT chemicals.

Slide 105

"NA" vs. "0"

Duration: 00:01:30



"NA" vs. "0"

- All data elements in Sections 5 and 6 must be completed. If you determine there was no release or transfer quantity:
 - Use "NA" (not applicable) when no possibility of the Section 313 chemical being released to or otherwise managed as waste in that media (e.g., facility has no on-site landfill)
OR
 - Use "0" when no release occurs or < 0.5 pound of a non-PBT Section 313 chemical from a waste stream is directed towards that medium
 - Example: Discharge to water is zero; however, release possible if control equipment fails
 - Must indicate a Basis of Estimate code (i.e., M1, M2, C, E1, E2, O) for all numerical estimates, including "0"

Notes:

It is important for TRI filers to understand the difference between reporting a zero and reporting "N/A," for "not applicable." Use "N/A" when there is no possibility of that chemical being released to or otherwise managed as waste in that medium.

For example, in Section 5 of the Form R, facilities enter the quantity of the TRI chemical that went to their on-site landfill. If the facility does not have an on-site landfill, there is no way that the chemical could go to an on-site landfill, so they report "N/A". Facilities should use zero when no release occurs or less than half a pound of the non-PBT chemical is directed towards that medium.

For example, if a facility has a waste stream discharged to water and has control equipment in place that completely removes the TRI chemical from the waste stream prior to discharge, they would enter a zero as the quantity discharged. They use a zero instead of N/A because a discharge is possible if, for example, their control equipment was not removing 100% of the chemical. Note that a Basis of Estimate code is required for all numerical estimates, including zero. A Basis of Estimate code should not be entered when "N/A" is reported.

Slide 106
Wastewater Clarification
Duration: 00:01:16

- Part II, Section 5.3: Release to stream or water body and Part II, Section 6.1: Discharges to POTW
 - Direct AND Indirect Discharges
 - Don't forget storm water!
 - If no monitoring data exists, estimate based on process knowledge and/or mass balance calculation
- Data Sources
 - DMRs (or related wastewater monitoring reports)
 - Other monitoring data such as permit applications
 - May be able to find official name of POTW via Enforcement & Compliance History Online (ECHO) or Facility Registry System
 - Visit: <http://www.epa-echo.gov/echo/>, or
 - <http://www.epa.gov/enviro/html/fri/ez.html>

Notes:

Facility wastewater discharges are reported in two places on the Form R. The quantity of the specific TRI chemical that is reported as released directly to a stream or water body, either through a discharge pipe or through storm water, goes in Section 5.3. The other place on the Form R where facilities could enter wastewater discharges are in Section 6.1 for discharges to a POTW. These are considered offsite transfers for further waste management.

To calculate the quantity of the TRI chemical discharged, facilities may have monitoring data available, such as may be required under a NPDES report. If no monitoring data exist, facilities should use the most appropriate methods including general process knowledge and mass balance calculations. Note that Section 6.1 requires the name of the POTW to which the TRI chemical is being transferred. Facilities may be able to find the official name of their POTW from one of the EPA websites shown here.

Slide 107
Off-Site Waste Transfers
Duration: 00:01:38

- Approach: ID potential sources --> ID data/tools --> estimate
- Potential off-site waste transfers of reportable chemicals
 - Hazardous waste
 - Non-hazardous waste (e.g., waste oil and coolant)
 - Trash
 - Scrap metal (reuse versus recycle)
 - Container residue: RCRA empty is NOT EPCRA empty
 - BE COMPREHENSIVE!
- Also need to be sure to identify ALL possible sources of waste composition data
- Identify final disposition of each Section 313 chemical:
 - Disposal, waste treatment, energy recovery, recycling

Notes:

Here are some tips specific to reporting quantities in Section 6 of the Form R. First, Identify all possible sources of waste sent off-site. Hazardous waste is one source and waste manifests may be helpful in calculating the quantity of some TRI chemicals sent off-site. However, also consider TRI chemicals in non-hazardous wastes, such as chemicals in waste oil, coolant, trash, or scrap metal. Also consider container residue – the RCRA definition of an “empty” drum may still contain TRI chemicals. These quantities need to be included as off-site transfers on Form R. For all quantities of the TRI chemical sent offsite for waste management, remember to record the “M” code, describing how the chemical was managed offsite. If a waste going offsite for incineration contained 100 pounds of the TRI chemical, 100 pounds would be reported in section 6.2 along with the name and location of the site it is being sent to, and the “M code” for incineration. If another waste stream contained 300 pounds of the same TRI chemical and was being sent to a different location for metals recovery, the 300 pounds would be listed separately, along with the name and location of the receiving facility, and the M code for metals recovery.

Slide 108
On-Site Waste Management
 Duration: 00:00:31

TRI REPORTING REQUIREMENTS

On-Site Waste Management

- Section 7: Examples of on-site waste management
 - Air pollution control devices (Section 7A)
 - Wastewater treatment processes (Section 7A)
 - Energy recovery devices (Section 7B)
 - Recycling devices (Section 7C)

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Notes:

Let's move on to Section 7 of the Form R. In Section 7, facilities don't report actual quantities, but instead describe the waste treatment energy recovery and recycling processes that the TRI chemical goes through at the facility. Section 7 is divided into separate subsections describing how the TRI chemical is treated for destruction on-site, recovered for energy on-site, and recycled on-site.

Slide 109
Waste Treatment Methods and Efficiency
 Duration: 00:01:09

TRI REPORTING REQUIREMENTS

Waste Treatment Methods and Efficiency

- Report each waste treatment method that the Section 313 chemical undergoes
 - Include even if method has no effect on the chemical
- Only data element in Form R focusing on the entire waste stream rather than the Section 313 chemical in the waste stream

SECTION 7A. ON-SITE WASTE TREATMENT METHODS AND EFFICIENCY

☐ Not Applicable (NA) - Check here if no on-site waste treatment is applied to any waste stream containing the toxic chemical or chemical category.

a. General Waste Stream (enter code)		b. Waste Treatment Method(s) Sequence (enter 1- or 4-character code(s))				d. Waste Treatment Efficiency (enter 2-character code)	
7A.1a	7A.1b	1	2	3	4	7A.1d	

109

Notes:

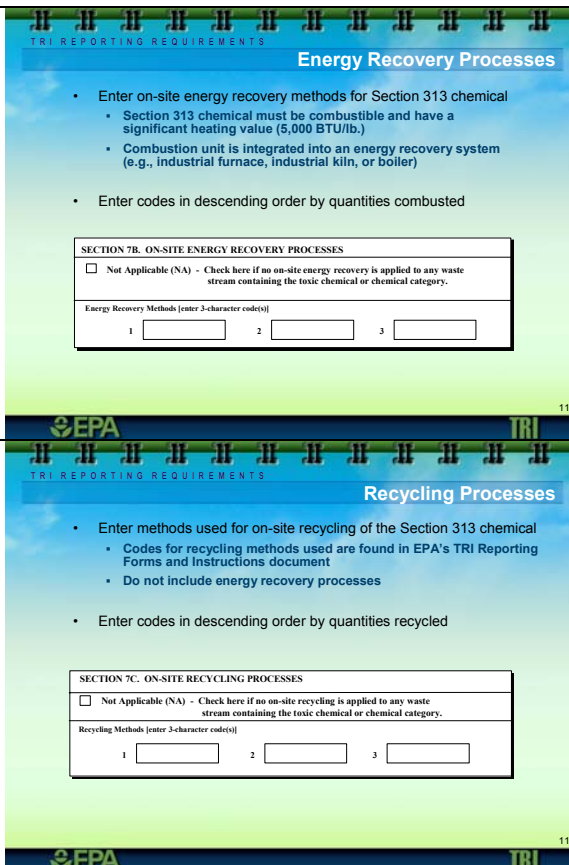
Section 7A covers on-site waste treatment methods. Under TRI, “treatment” means that the waste chemical is removed or destroyed. In section 7A.1a, facilities describe each waste stream containing the TRI chemical using a “waste stream code” that denotes whether the waste stream is solid, liquid, or gaseous. In Section 7A.1b, facilities enter the codes that represent each of the waste treatment methods that the waste stream goes through in order. All treatment methods must be recorded, even if the method does not affect the TRI chemical. Finally, in 7A.1d, the facility reports a code that represents the range of treatment efficiency that the combined waste treatment methods had on the TRI chemical.

Note that all of the codes required for Section 7 can be obtained from the “Reporting Forms and Instructions” and through the TRI-ME and TRI-ME web reporting applications.

Slide 110

Energy Recovery Processes

Duration: 00:00:25



Energy Recovery Processes

- Enter on-site energy recovery methods for Section 313 chemical
 - Section 313 chemical must be combustible and have a significant heating value (5,000 BTU/lb.)
 - Combustion unit is integrated into an energy recovery system (e.g., industrial furnace, industrial kiln, or boiler)
- Enter codes in descending order by quantities combusted

SECTION 7B. ON-SITE ENERGY RECOVERY PROCESSES

☐ Not Applicable (NA) - Check here if no on-site energy recovery is applied to any waste stream containing the toxic chemical or chemical category.

Energy Recovery Methods (enter 3-character code(s))

1 2 3

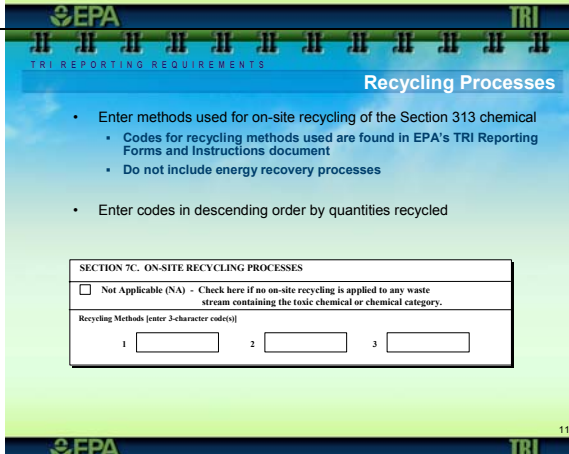
Notes:

Section 7B covers on-site energy recovery processes that the TRI chemical goes through. Only chemicals that have a significant heat value and for which the heat energy is actually recovered should be reported in this section. Codes representing each energy recovery method that the TRI chemical enters are reported in section 7B.

Slide 111

Recycling Processes

Duration: 00:00:25



Recycling Processes

- Enter methods used for on-site recycling of the Section 313 chemical
 - Codes for recycling methods used are found in EPA's TRI Reporting Forms and Instructions document
 - Do not include energy recovery processes
- Enter codes in descending order by quantities recycled

SECTION 7C. ON-SITE RECYCLING PROCESSES

☐ Not Applicable (NA) - Check here if no on-site recycling is applied to any waste stream containing the toxic chemical or chemical category.

Recycling Methods (enter 3-character code(s))

1 2 3

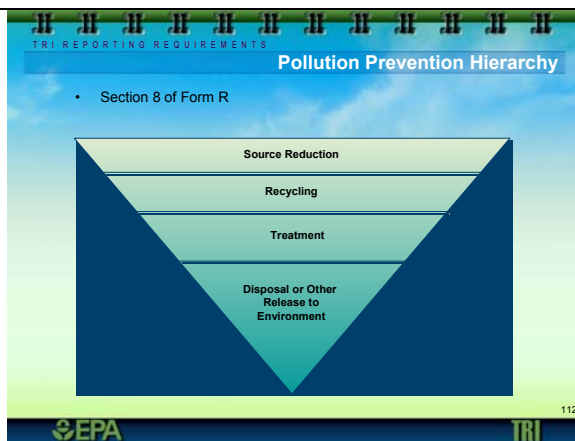
Notes:

Section 7C covers on-site recycling processes that the TRI chemical goes through. Note that recycling recovers the TRI chemical from the waste stream so that it can be used over again. It does not include energy recovery. Codes representing each recycling method that the TRI chemical enters are reported in section 7C.

Slide 112

Pollution Prevention Hierarchy

Duration: 00:01:35



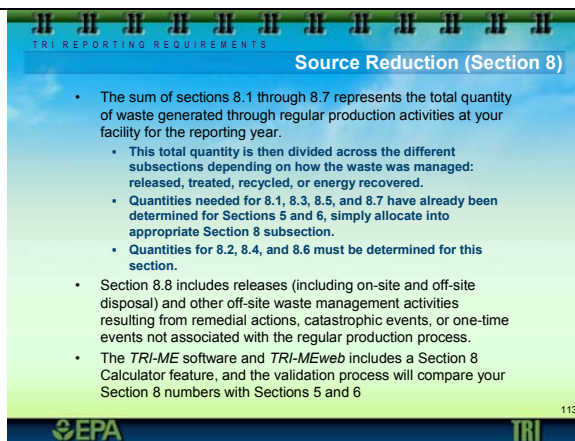
Notes:

Now we're going to go through some pointers on Section 8 of the form. Section 8 is the section of Form R focused on pollution prevention. This pollution prevention hierarchy shown here was institutionalized by the Pollution Prevention Act of 1990, and the idea here is that facilities always want to be moving up this triangle toward source reduction. Facilities should look for opportunities for source reduction and think about how they can you avoid creating wastes in the first place. If that is not possible, they should look at opportunities for recycling the chemical. If that's not possible, they move down the hierarchy and determine if the chemical be treated. If there is no way to destroy the chemical, then their last resort is disposal or release to the environment. So, we always want to be evaluating ways to move towards source reduction. Section 8 of the TRI Form R is intended to help track progress and identify opportunities for pollution prevention. In Section 8, facilities report quantities for the current reporting year, as in the other sections of the form, but quantities are also reported for the previous year, and they are projected out for the next two years. This provides a trend over time to look at to determine if there are more opportunities to move up this pollution prevention hierarchy.

Slide 113

Source Reduction (Section 8)

Duration: 00:02:23



The slide features a header with a row of 12 icons and the text 'TRI REPORTING REQUIREMENTS'. Below this is a title bar 'Source Reduction (Section 8)'. The main content area has a light blue background with a list of bullet points. At the bottom, there is a green bar with the EPA logo on the left and the TRI logo on the right. The slide number '113' is in the bottom right corner.

Source Reduction (Section 8)

- The sum of sections 8.1 through 8.7 represents the total quantity of waste generated through regular production activities at your facility for the reporting year.
 - This total quantity is then divided across the different subsections depending on how the waste was managed: released, treated, recycled, or energy recovered.
- Quantities needed for 8.1, 8.3, 8.5, and 8.7 have already been determined for Sections 5 and 6, simply allocate into appropriate Section 8 subsection.
- Quantities for 8.2, 8.4, and 8.6 must be determined for this section.
- Section 8.8 includes releases (including on-site and off-site disposal) and other off-site waste management activities resulting from remedial actions, catastrophic events, or one-time events not associated with the regular production process.
- The TRI-ME software and TRI-MEweb includes a Section 8 Calculator feature, and the validation process will compare your Section 8 numbers with Sections 5 and 6

Notes:

Now we will discuss the details of completing Section 8 of Form R.

In Section 8.1, the quantity of the chemical released is reported. In Sections 8.2 and 8.3, the quantities of the chemical used for energy recovery on-site and off-site are reported. To be reported as energy recovery, the TRI chemical must have a significant heat value and that heat must be recovered. In Sections 8.4 and 8.5, the quantities of the chemical recycled on-site and off-site are reported. And, in Sections 8.6 and 8.7, the quantities of the chemical treated on-site and off-site are reported. Under TRI, treatment means “destroyed”, so metals, which cannot be destroyed, should not be reported in these sections.

Adding up the quantities in section 8.1 through 8.7 gives the total quantity of waste generated from production activities at the facility. This includes the total quantity released, treated, recycled, or used for energy recovery. Some of these quantities, such as releases and off-site transfers of chemicals, may have already been calculated to complete sections 5 and 6 of the Form. The TRI-ME and TRI-ME web applications include a Section 8 calculator tool that will help with these calculations. However, the quantities reported in sections 5 and 6 of the form can differ from those reported in Sections 8.1 through 8.7. The sections 5 and 6 quantities can include TRI chemical released and transferred as part of a remedial clean-up action or catastrophic one time event.

In section 8, the quantity of TRI chemical released or transferred offsite as part of a remedial clean-up or catastrophic events is separated out and reported in Section 8.8. This quantity is TRI chemical managed as waste from one-time events not associated with the regular production process.

Slide 114

Releases and Other Waste Management

Duration: 00:01:43

Part II. Sections 8.1 - 8.7	
8.1a	Total on-site disposal to Class I UI wells, RCRA & other landfills 5.4.1 + 5.5.1A + 5.5.1B – 8.8 (on-site release or disposal due to catastrophic event)
8.1b	Total other on-site disposal or other releases 5.1, 5.2, 5.3.1, 5.3.2, 5.3.3, 5.4.2, 5.5.2, 5.5.3A, 5.5.3B, 5.5.4) – 8.8 (on-site release or disposal due to catastrophic event)
8.1c	Total off-site disposal to Class I UI wells, RCRA & other landfills Section 6.2, M64, M65, and M81 – 8.8 (off-site disposal due to catastrophic event)
8.1d	Total other off-site disposal or other releases 6.1 (for metals and metal category compounds only) + Section 6.2 (quantities associated with M codes M10, M41, M62, M66, M67, M73, M79, M82, M90, M94, M99) – 8.8 (off-site disposal due to catastrophic event)
8.3	Off-site energy recovery 6.2, M56 and M92 – 8.8 (off-site energy recovery due to catastrophic events)
8.5	Off-site recycling 6.2, M20, M24, M26, M28, and M93 – 8.8 (off-site recycling due to catastrophic events)
8.7	Off-site treatment 6.1 (excluding metals and metal category compound), 6.2, M50, M54, M61, M69, M95 – 8.8 (off-site treatment due to catastrophic event)

Notes:

This table shows the subsections of Section 8 that may be derived from information that was already recorded in Section 5 (onsite releases) and in Section 6 (offsite transfers) of the Form R. For example, all the quantities recorded for the chemical as on-site releases are all reported in Section 8.1. Section 8.1 is the quantity of the chemical released and disposed, onsite and offsite. Offsite releases and disposals come from the part of the Form R where offsite transfers are entered, and includes only those transfers that were ultimately be released or disposed rather than treated or recycled or used for energy recovery. Recall that for each off-site transfer, a code was entered representing the disposition of that chemical.

Also, information for Sections 8.3, 8.5, and 8.7 may have already been calculated in other parts of the form. Here we direct you to where in the Form these quantities may have already been reported. Why re-enter quantities that have already been entered elsewhere on the form? It is so the information can be viewed in a format that helps with the identification of pollution prevention opportunities. The TRI-ME and TRI-ME web applications' Section 8 calculator tool helps with all these sections. It will automatically generate the numbers from Sections 5 and 6 and gives an opportunity to check them over before entering them into Section 8.

Slide 115

Releases and Other Waste Management

Duration: 00:01:00

Part II. Sections 8.1 - 8.7	
8.2	On-Site Energy Recovery <ul style="list-style-type: none"> Determine quantity for activities described in 7B Report quantity actually combusted in energy recovery unit (i.e., consider efficiency)
8.4	On-Site Recycling <ul style="list-style-type: none"> Determine quantity for activities described in 7C Report quantity actually recycled (i.e., consider efficiency)
8.6	On-Site Treatment <ul style="list-style-type: none"> Determine quantity of the chemical for activities on wastestream describes in 7A Report quantity actually destroyed (i.e., consider efficiency) Metals and metal category compounds cannot be reported here

Notes:

The three subsections of Section 8 shown here are different from the other subsections already discussed in that the waste management quantities have not already been considered in previous sections of the Form R. In sections 8.2, 8.4 and 8.6, facilities report the quantities of the TRI chemical used for on-site energy recovery, on-site recycling, and on-site treatment, respectively. Again, to be reported as energy recovery, the TRI chemical itself, and not only the entire wastestream, must have an energy value and be must be combusted in an energy recovery unit. To be reported as recycling, the TRI chemical itself must be recycled. And to be reported as treatment, the TRI chemical itself must be destroyed. Note that metals cannot be destroyed.

Slide 116

Remedial, Catastrophic, or One-Time Amounts

Duration: 00:01:24

TRI REPORTING REQUIREMENTS

Remedial, Catastrophic, or One-Time Amounts

- Section 8.8: Remedial, catastrophic, or one-time amounts
 - Quantity of Section 313 chemical released into the environment or transferred off-site as a result of:
 - Remediation
 - Catastrophic events (e.g., earthquake, hurricane, fire, floods)
 - One-time events not associated with production processes (e.g., pipe rupture due to unexpected weather)
 - Does not include Section 313 chemicals treated, recovered for energy, or recycled ON-SITE
 - Excludes quantities in Sections 8.1 through 8.7

EPA TRI 116

Notes:

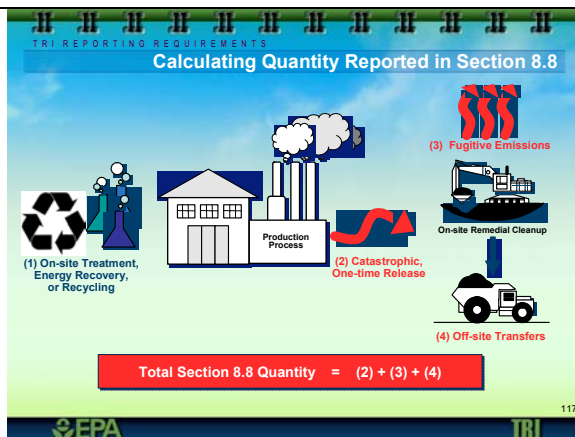
Section 8.8 is where facilities enter the quantities of the TRI chemical that were released to the environment or transferred offsite due to remediation activity, or catastrophic or one-time events. This does not include chemicals that are treated onsite, recovered for energy onsite, or recycled on-site, no matter how those chemicals were generated. Note that the quantities in Section 8.8 are exclusive of the quantities entered in Section 8.1 through 8.7; there is no overlap. For example, if a facility has an ongoing remedial action for a TRI chemical, and there are fugitive releases to the air associated with that remedial action, the quantity of the chemical released to the air is not reported in section 8.1 because the release is from the remedial activity. The quantity is reported in Section 8.8.

Also note that quantities reported in Section 8.8 do include preventable quantities, like those associated with spills from a production process, or a leaking pipe, or anything that could have been prevented, such as through more rigorous prevention or maintenance procedures.

Slide 117

Calculating Quantity Reported in Section 8.8

Duration: 00:00:41



Notes:

Here we show a manufacturing process where there is a catastrophic one-time release – the quantity of the TRI chemical in that release is reported in Section 8.8. There is also a remediation activity at the site. Fugitive emissions and off-site transfer of the TRI chemical from the remediation are also reported in Section 8.8. However, any quantity of the chemical from either of these events that is treated onsite, used onsite for energy recovery, or recycled onsite, is reported in Sections 8.1 through 8.7.

Slide 118

Production Ratio or Activity Index

Duration: 00:03:47

Production Ratio or Activity Index

- Section 8.9: Production ratio or activity index
 - A ratio of production or activity involving the Section 313 chemical in the reporting year to production or activity in the previous year
 - Allows quantities of the Section 313 chemical reported in Sections 8.1 through 8.7 in the current year to be compared to quantities reported in the prior year
- Examples:
 - Oven manufacturing
 $\frac{40,000 \text{ ovens assembled (Current RY)}}{35,000 \text{ ovens assembled (Prior RY)}} = 1.14$
 - Tank washouts
 $\frac{50 \text{ Washouts (Current RY)}}{60 \text{ Washouts (Prior RY)}} = 0.83$
- Possible data sources: production reports, maintenance records for otherwise used chemicals, waste minimization section of the RCRA hazardous waste report, state/corporate pollution prevention reports

EPA TRI 118


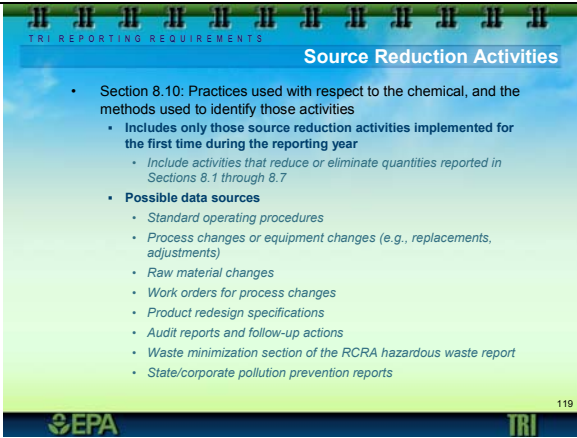

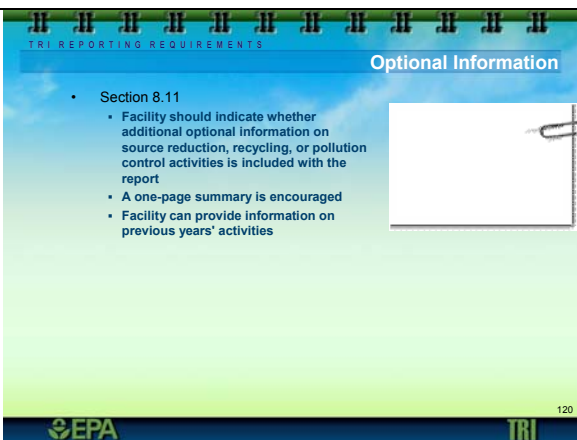
Notes:

The production ratio or activity index for the chemical goes in Section 8.9. The production ratio is a unitless value that compares this year's production involving this chemical to last year's production. This helps facilities examine trends in their quantities released and managed. For example, releases could be decreasing over time because pollution prevention is being implemented resulting in increased efficiency. Or releases could be decreasing because production is going down. Let's go through a couple of examples to illustrate this.

The first example is an oven manufacturer, and at this facility 40,000 ovens were assembled this reporting year, compared to 35,000 ovens assembled in the prior reporting year. So dividing 40,000 by 35,000 results in a production ratio of 1.14. This is a unitless value. 1.14 would represent a 14% increase in production from last year to this year. But neither 14, or 0.14 should be reported. Only 1.14, the actual ratio, should be reported.

Perhaps the TRI chemical use has no connection to production. Alternatively, facilities may use an activity index instead of a production ratio. In the activity index example shown here, a chemical is used in tank washouts. There were 50 washouts this year compared to 60 the last year. That would result in an activity index of 0.83.

The facility must decide if a production ratio or an activity index best reflects the use of the chemical for which they are reporting. For example, if the facility is reporting on a chemical that is in the paint used to paint ovens, using the number of ovens would be a good production ratio. As they make more ovens, they are going to be using proportionally more of the paint, if they do not implement any pollution prevention practices. However, if the chemical is used in a cleaning solution to clean tanks, it may be that the facility is increasing production by running larger jobs that require fewer cleanings. Production isn't a good indicator of the year-to-year use of that chemical, so they would opt for using an activity index instead. If a facility does implement pollution prevention practices, they still may see their chemical use remain the same even though their production ratio is greater than one, meaning their production is going up. That would indicate they are using less of the chemical per unit of product.

<p>Slide 118 - Continued Production Ratio or Activity Index Duration: 00:03:47</p>		<p>Notes:</p> <p>Another note, this number can never be negative (since we are dividing two positive numbers). If production is going up, the production ratio is going to be greater than one. If production is going down, the production ratio or activity index is going to be less than one, as in the tank washout example. Barring significant changes in production or activities at a facility, most production ratios and activity indexes are within 0.5 and 2, which would indicate a 50 percent decrease and a 100 percent increase in production or activities, respectively.</p>
<p>Slide 119  Source Reduction Activities Duration: 00:00:51</p>	 <ul style="list-style-type: none"> Section 8.10: Practices used with respect to the chemical, and the methods used to identify those activities <ul style="list-style-type: none"> Includes only those source reduction activities implemented for the first time during the reporting year <ul style="list-style-type: none"> Include activities that reduce or eliminate quantities reported in Sections 8.1 through 8.7 Possible data sources <ul style="list-style-type: none"> Standard operating procedures Process changes or equipment changes (e.g., replacements, adjustments) Raw material changes Work orders for process changes Product redesign specifications Audit reports and follow-up actions Waste minimization section of the RCRA hazardous waste report State/corporate pollution prevention reports 	<p>Notes:</p> <p>In section 8.10 of the Form R, facilities report on the source reduction, or pollution prevention activities, implemented during the reporting year that could reduce or eliminate quantities of the chemical reported in sections 8.1 through 8.7 of the form. The various source reduction activities are represented by codes that can be found in the “Reporting Forms and Instructions” document as well as in the TRI-ME desktop and TRI-ME web applications. There are many types of activities that could be considered source reduction activities. Some are listed here. Reporters should review these codes, because they may not realize that some of the activities that they have implemented during the year would count as source reduction.</p>
<p>Slide 120  Optional Information Duration: 00:00:21</p>	 <ul style="list-style-type: none"> Section 8.11 <ul style="list-style-type: none"> Facility should indicate whether additional optional information on source reduction, recycling, or pollution control activities is included with the report A one-page summary is encouraged Facility can provide information on previous years' activities 	<p>Notes:</p> <p>In section 8.11, facilities can provide any additional information on their source reduction, recycling, or pollution control activities to supplement their TRI report. The information may include activities from previous years. This section of the TRI Form is optional.</p>

Slide 121

Section 8 Equations

Duration: 00:01:50

TRI REPORTING REQUIREMENTS	
Section 8 Equations	
8.1a Total on-site disposal to Class I Underground Injection wells, RCRA Subtitle C landfills, and other landfills	Section 5.4.1 + 5.5.1A + 5.5.1B + 8.8 (on-site release or disposal due to catastrophic event)
8.1b Total off-site disposal to Class I Underground Injection wells, RCRA Subtitle C landfills, and other landfills	Section 5 (includes 5.1, 5.2, 5.3.1, 5.3.2, 5.3.3, 5.4.2, 5.5.2, 5.5.3A, 5.5.3B, 5.5.4) + 8.8 (on-site release or disposal due to catastrophic event)
8.1c Total off-site disposal to Class I Underground Injection wells, RCRA Subtitle C landfills, and other landfills	Section 6.1 (for metals and metal category compounds only) if known, Section 6.2, M64, M65, and M61 + 8.8 (off-site disposal due to catastrophic event)
8.1d Total off-site disposal or other releases	Section 6.1 (for metals and metal category compounds only) + Section 6.2 (quantities associated with M codes M10, M41, M62, M66, M67, M73, M75, M82, M86, M94, M99) + 8.8 (off-site disposal due to catastrophic event)
8.2 Quantity used for Energy Recovery on-site	As reported only in this section, 7B6.2 consistency
8.3 Quantity used for Energy Recovery off-site	6.2 (energy recovery) + 8.8 (off-site energy recovery due to catastrophic events)
8.4 Quantity Recycled on-site	As reported only in this section, 7C6.4 consistency. For section 7C, a new 3 code classification system replaces original 10 code system beginning 01/01/2005.
8.5 Quantity Recycled off-site	6.2 (recycling) + 8.8 (off-site recycling due to catastrophic events)
8.6 Quantity Treated on-site	As reported only in this section
8.7 Quantity Treated off-site	6.1 (excluding metal/metal category compounds) + 6.2 (treatment) + 8.8 (off-site treatment due to catastrophic events)
8.8 Quantity released to environment as result of remedial actions, catastrophic events, one-time events not associated w/production	As reported only in this section
8.9 Production Ratio or Activity Index	As described in instruction book
8.10 Source Reduction Activities	Codes
8.11 Text-Box	Optional area for summarizing information on source reduction

Notes:

Because much of the information reported in section eight of the TRI Form R has been reported in sections five and six, which deal with on-site releases and off-site transfers, equations have been developed to help facilities correctly complete section eight based upon what they reported in sections five and six. The equations are shown here for reference.

For example, in the first row, section 8.1a, facilities report the total on-site disposal of the TRI chemical to Class I Underground Injection wells, RCRA Subtitle C landfills, and other landfills. This information was already reported in Section 5.4.1, 5.5.1a, and 5.5.1b on the TRI Form R. Because section 8.1a does not include any quantity of TRI chemical that was released as a result of a remedial action or catastrophic event or one-time event, and this information IS included in section five, we therefore need to subtract any quantities associated with remedial action or catastrophic event or one-time events that were reported in section five. These equations are available for most parts of section 8 of the TRI form.

Facilities that use the TRI-ME desktop and TRI-ME web reporting applications are assisted in this process by the automatic calculators that are part of these tools. In addition, prior to completing and submitting the Form, the TRI-ME software runs a validation to make sure that the information provided in section eight and sections five and six do not conflict.

Slide 122

Pollution Prevention Information

Duration: 00:00:18

TRI REPORTING REQUIREMENTS

Pollution Prevention Information

- OPPT Pollution Prevention (P2)
 - <http://www.epa.gov/opptintr/p2home/index.htm>
- Pollution Prevention Information Clearinghouse (PPIC)
 - (202) 566-0799
 - <http://www.epa.gov/opptintr/ppic/index.htm>

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Notes:

Facilities that are interested in using source reduction techniques to reduce their TRI chemical use and wastes can get assistance from the EPA's office of Pollution Prevention and the Pollution Prevention Information Clearinghouse, at the websites and telephone number shown here.

Slide 123

Reference Sources

Duration: 00:01:11

TRI REPORTING REQUIREMENTS

Reference Sources

- EPA Industry Guidance located at <http://www.epa.gov/tri>
- AP-42: Compilation of Air Pollutant Emission Factors located at <http://www.epa.gov/ttn/chief>
- Technology Transfer Network located at <http://www.epa.gov/ttn>
 - AP-42
 - WATER9 program
 - Updates WATER8, CHEMDAT8, and CHEM9
 - TANKS program
- Perry's Chemical Engineer's Handbook; CRC Handbook of Chemistry and Physics; Lange's Handbook of Chemistry

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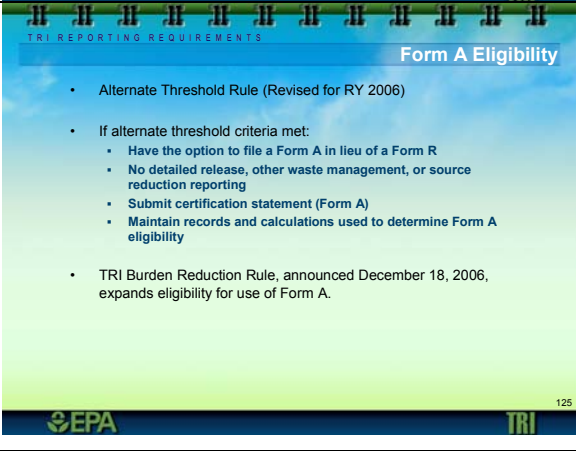

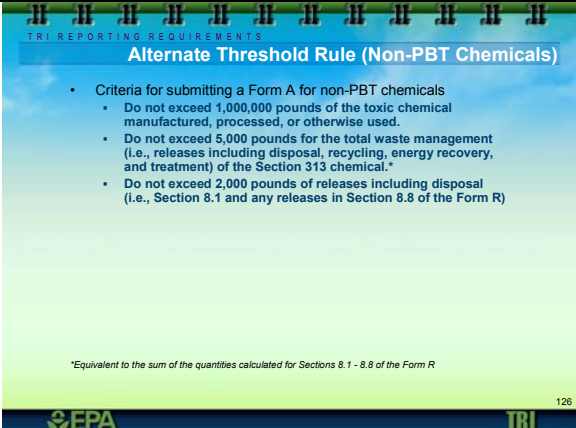
Notes:

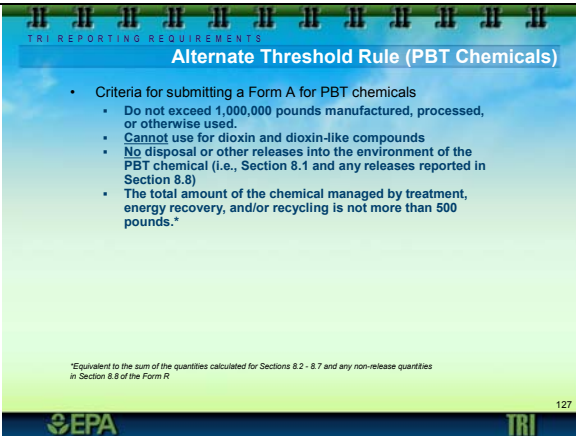
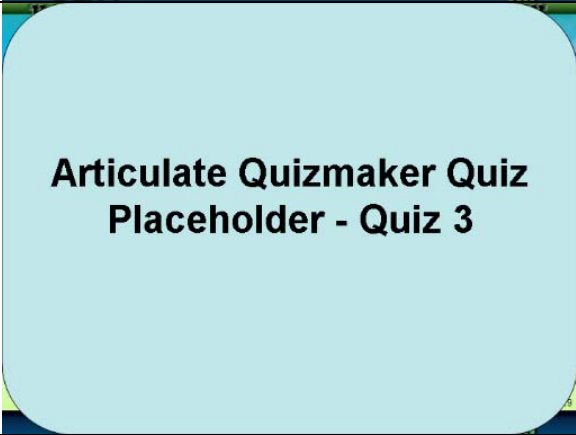

Here are some addition sources of information and assistance with the TRI reporting, in general. The first is the TRI program homepage which has a great deal of chemical-specific and industry-specific guidance and all of the reporting forms and instructions.

In addition, EPA's air pollution emission factors are available in a document called the AP-42. The Website for that is also shown here.

There is also a software program called the WATER9 program. This is a PC-based software that assists with estimates of the fate of organic compounds in various wastewater treatment units.

TANKS9 is also a PC-based program used to estimate emissions of organic chemicals from several different types of storage tanks. This software uses a database of over 100 different liquid organic chemicals. It includes meteorological data which – from over 250 cities in the US to help with those calculations. Those are both also available from the EPA Website shown here.

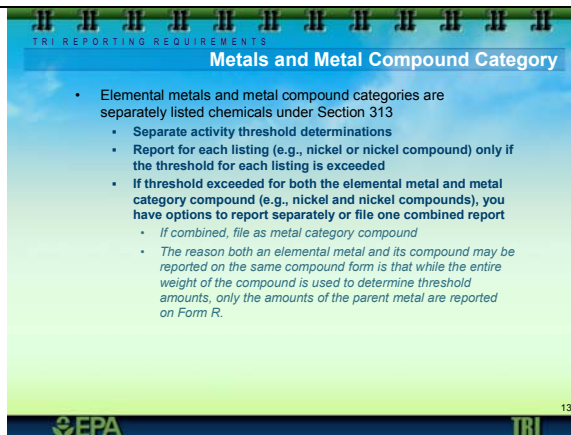
<p>Slide 124 </p> <p>Section VII: TRI Form A</p> <p>Duration: 00:00:05</p>		<p>Notes:</p>
<p>Slide 125 </p> <p>TRI Form A</p> <p>Duration: 00:00:46</p>	 <ul style="list-style-type: none"> • Alternate Threshold Rule (Revised for RY 2006) • If alternate threshold criteria met: <ul style="list-style-type: none"> • Have the option to file a Form A in lieu of a Form R • No detailed release, other waste management, or source reduction reporting • Submit certification statement (Form A) • Maintain records and calculations used to determine Form A eligibility • TRI Burden Reduction Rule, announced December 18, 2006, expands eligibility for use of Form A. 	<p>Notes:</p> <p>In addition to the TRI Form R, there is an alternative form, called the Form A Certification Statement, that facilities can submit in lieu of the Form R, if they meet the criteria. Determinations for eligibility must be made on a chemical-by-chemical basis. The Form A can provide significant burden reduction because it does not require release or other waste management or source reduction information. It mainly is comprised of Part one of the Form R and the name and the CAS number of the chemical.</p> <p>In reporting year 2006, EPA expanded the eligibility for the use of the Form A certification via the Alternative Threshold Rule.</p>
<p>Slide 126 </p> <p>Alternate Threshold Rule (Non-PBT Chemicals)</p> <p>Duration: 00:00:47</p>	 <ul style="list-style-type: none"> • Criteria for submitting a Form A for non-PBT chemicals <ul style="list-style-type: none"> • Do not exceed 1,000,000 pounds of the toxic chemical manufactured, processed, or otherwise used. • Do not exceed 5,000 pounds for the total waste management (i.e., releases including disposal, recycling, energy recovery, and treatment) of the Section 313 chemical.* • Do not exceed 2,000 pounds of releases including disposal (i.e., Section 8.1 and any releases in Section 8.8 of the Form R) <p><small>*Equivalent to the sum of the quantities calculated for Sections 8.1 - 8.8 of the Form R</small></p>	<p>Notes:</p> <p>The criteria for use of Form A varies depending on whether or not the chemical is PBT chemical or not. For non-PBT chemicals, in order to use the Form A, a facility must meet the following criteria. First, the facility cannot exceed one million pounds of the chemical manufactured, processed, or otherwise used. Second, the facility cannot exceed 5,000 pounds for the total waste management of the TRI chemical. And by waste management, again, we mean the releases, recycling, energy recovery, and treatment of the TRI chemical. And the facility cannot exceed 2,000 pounds of the TRI chemical released or disposed.</p>

<p>Slide 127 🎧</p> <p>Alternate Threshold Rule (PBT Chemicals)</p> <p>Duration: 00:00:44</p>	 <ul style="list-style-type: none"> Criteria for submitting a Form A for PBT chemicals <ul style="list-style-type: none"> Do not exceed 1,000,000 pounds manufactured, processed, or otherwise used. Cannot use for dioxin and dioxin-like compounds No disposal or other releases into the environment of the PBT chemical (i.e., Section 8.1 and any releases reported in Section 8.8) The total amount of the chemical managed by treatment, energy recovery, and/or recycling is not more than 500 pounds.* <p><small>*Equivalent to the sum of the quantities calculated for Sections 8.2 - 8.7 and any non-release quantities in Section 8.8 of the Form R</small></p>	<p>Notes:</p> <p>In previous years, Form A was not allowed for PBT chemicals. Starting in reporting year 2006, the Form A can be used for PBT chemicals, provided the following criteria are met. First, the facility cannot exceed one million pounds of the TRI chemical, manufactured, processed, or otherwise used. Second, it cannot be used for dioxin and dioxin-like compounds. Third, there can be no releases or other disposal into the environment of the PBT chemical. And fourth, facilities cannot exceed 500 pounds for recycling, energy recovery, and treatment of the TRI chemical.</p>
<p>Slide 128</p> <p>Quiz 3</p> <p>Duration: 00:02:00</p>	 <p>Articulate Quizmaker Quiz Placeholder - Quiz 3</p>	
<p>Slide 129 🎧</p> <p>Section VIII: TRI Reporting Guidance</p> <p>Duration: 00:00:05</p>	 <p>Section VIII: TRI Reporting Guidance</p>	<p>Notes:</p>

Slide 130

TRI Reporting Guidance

Duration: 00:01:52



Metals and Metal Compound Category

- Elemental metals and metal compound categories are separately listed chemicals under Section 313
 - Separate activity threshold determinations
 - Report for each listing (e.g., nickel or nickel compound) only if the threshold for each listing is exceeded
- If threshold exceeded for both the elemental metal and metal category compound (e.g., nickel and nickel compounds), you have options to report separately or file one combined report
 - If combined, file as metal category compound
 - The reason both an elemental metal and its compound may be reported on the same compound form is that while the entire weight of the compound is used to determine threshold amounts, only the amounts of the parent metal are reported on Form R.

Notes:

Now we are going to look briefly at some of the unique requirements associated with reporting for metals and metal compound categories. In the Advanced Concepts module, we look at these unique requirements and other special chemicals and chemical categories in more detail.

Note that metals and metal compound categories are separately listed chemicals under TRI. They each have a separate activity threshold determination – report on the metal only if the threshold for the metal is exceeded, and report for the metal compound only if the threshold for the metal compound is exceeded.

So if a facility handles elemental nickel and nickel compounds at their facility, they should look at the two separately when determining if they need to report. They look at the elemental nickel and see if they manufacture, process, or otherwise use quantities exceeding the threshold for nickel. Separately, they look at their nickel compounds and see if the quantity manufactured, processed, or otherwise used exceeds the threshold for nickel compounds. They look at the two as completely unrelated chemicals.

However, if the threshold is exceeded for both the elemental metal and for the metal compound – for example, both for nickel and for nickel compounds, then the option exists to either report separately or to file in one combined form. When combining the reports, the single report should be for the metal compound category. So, if the facility exceeded the threshold for nickel and they exceeded the threshold for nickel compounds, they could file for each separately, or they could file for the combined elemental nickel releases and releases from the nickel compounds on one report.

Slide 131

Metal Compounds

Duration: 00:00:37

TRI REPORTING REQUIREMENTS

Metal Compounds

- For threshold calculations, such as coincidental manufacture of metal compounds through combustion of fuels, use the total weight of the compound, not the parent metal
- Releases and other waste management estimates (what you report on the Form R): these quantities are based on the parent metal weight only!

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Notes:

Here are a few more tips on metal compounds. When calculating the threshold quantities for metal compounds, use the total weight of the compound, not just the parent metal portion. So, when determining whether a report for a metal compound is necessary, calculate how much of the metal compound was manufactured or processed or otherwise used, and use the weight of the compound as a whole. For release and other waste management estimates – that's the information that goes on the Form R – use only the weight of the parent metal portion of the compound.

Slide 132

Metal Compounds Example

Duration: 00:00:56

TRI REPORTING REQUIREMENTS

Metal Compounds Example

- A facility manufactured 200 pounds of lead oxide (PbO) while combusting coal. PbO contains one atom* of lead and one atom of oxygen. For their manufacturing threshold, the facility counts the entire 200 pounds of lead oxide.
- In the facilities Form R reporting, they count only the portion of the 200 pounds that comes from the lead, and not the portion that comes from the oxygen.
- The atomic weight of lead is ~207, and the atomic weight of oxygen is ~16, which means that about 93% of the weight of PbO comes from lead ($207/(207 + 16) = 0.93$), and about 7% of the weight comes from oxygen ($16/(207 + 16) = 0.07$).
- So, if the facility is reporting a stack release based on 200 pounds of lead oxide manufactured during combustion, they would report 93% of 200 pounds, which is 186 pounds of Pb.

* Every atom is assigned a number based on its weight, called the atomic weight. This information is found on the chemical periodic table (readily available on the internet).

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Notes:

Here is an example of a facility that is coincidentally manufacturing lead oxide when combusting coal. They manufactured 200 pounds of lead oxide during the reporting year. All 200 pounds is applied to the manufacturing threshold for lead compounds. Because the threshold of 100 pounds is exceeded, the facility will submit a Form R. Knowing that the atomic weight of lead is about 207 and the atomic weight of oxygen is about 16, they determined that the lead makes up about 93 percent of the weight of the lead oxide. So, if all of the lead oxide manufactured is released to the air, the facility is going to report releases of lead oxide on the TRI Form R equal to 93 percent of the 200 pounds, which is 186 pounds.

Slide 133

Quiz 4

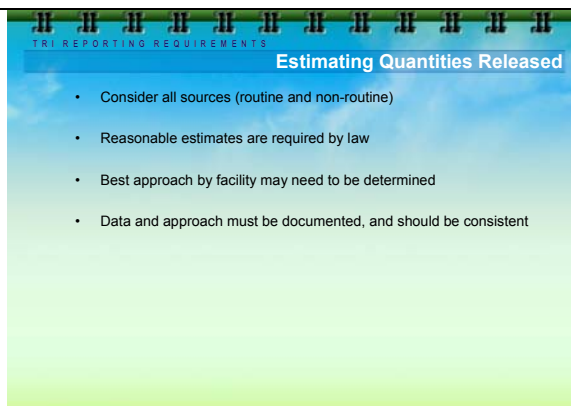
Duration: 00:02:00

Articulate Quizmaker Quiz Placeholder - Quiz 4

Slide 134

Estimating Quantities Released

Duration: 00:00:36



TRI REPORTING REQUIREMENTS

Estimating Quantities Released

- Consider all sources (routine and non-routine)
- Reasonable estimates are required by law
- Best approach by facility may need to be determined
- Data and approach must be documented, and should be consistent

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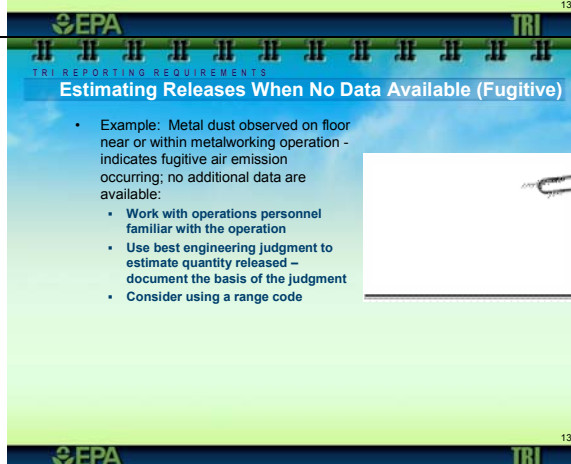
Notes:

Here are a few general tips for calculating releases and waste management quantities on the TRI Form R. First, be comprehensive and consider all possible sources throughout the reporting year. By law, facilities are required to come up with reasonable estimates based on the best available information. However, the best approach will vary from facility to facility and chemical to chemical, so facilities themselves need to determine the best approach. Be sure to document the data used and the approach.

Slide 135

Estimating Releases When No Data Available (Fugitive)

Duration: 00:01:22



TRI REPORTING REQUIREMENTS

Estimating Releases When No Data Available (Fugitive)

- Example: Metal dust observed on floor near or within metalworking operation - indicates fugitive air emission occurring; no additional data are available:
 - Work with operations personnel familiar with the operation
 - Use best engineering judgment to estimate quantity released - document the basis of the judgment
 - Consider using a range code

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Notes:

Another common question is: how do you come up with an estimate when there are no data available? This comes up often in the case of fugitive emissions. Facilities may have a process and a chemical for which they know that fugitive air emissions occur, based on the nature of the process or of the chemical, but do not know how to go about quantifying those fugitive emissions.

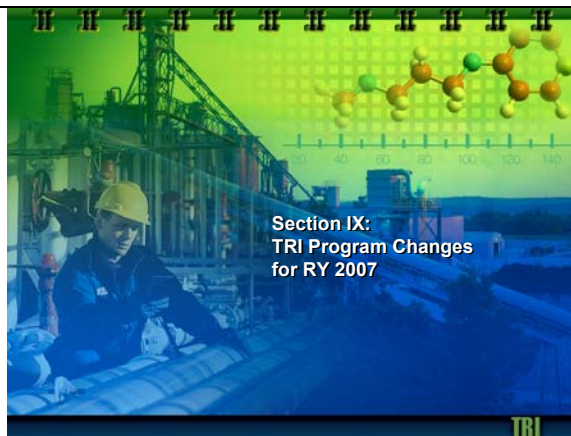
The example shown here is for a metalworking operation where there is metal dust on the floor indicating fugitive air emissions are occurring.

However, if the facility does not track or measure the dust, how can they quantify these fugitive emissions?

Facilities can work with the operations personnel familiar with the operation in determining when the dust is generated, how it is generated, and its composition (and specifically how much of the TRI chemical in question does it contain). Then they use their best engineering judgment to indicate the quantity of release. Because it will not be a precise estimate, they may want to consider using a range code. They will also have to indicate the Basis of Estimate code for the quantity of fugitive emissions, which is likely the "O" Basis of Estimate code for engineering judgment.

Slide 136
**Section IX: TRI
Program Changes for
RY 2007**

Duration: 00:00:05



Notes:

Slide 137
**TRI Program Changes
for RY 2007**

Duration: 00:01:12

TRI Program Changes for RY 2007

- Key program changes are listed in the front of the Reporting Forms & Instructions, as well as in *TRI-ME*, and on the TRI website.
- More specific Basis of Estimate Codes effective for RY2007:
 - Continuous monitoring (M1)
 - Periodic or random monitoring (M2)
 - Mass balance calculations (C)
 - Published emissions factors (E1)
 - Site-specific emissions factors (E2)
 - Other approaches (O)
- Additional codes detailing reasons for revisions to Forms R and A
 - New monitoring data (RR1)
 - New emission factor(s) (RR2)
 - New chemical concentration data (RR3)
 - Recalculations (RR4)
 - Other reasons (RR5)

Notes:

Next we're going to talk about some of the recent updates in the current reporting year, which is reporting year 2007. The key program changes for every year can be found at the front of the Reporting Forms and Instructions document, which is available from the TRI Website. Also the TRI-ME desktop and TRI-ME web applications will provide information on the recent program updates as well.

For reporting year 2007, EPA has revised and expanded the "Basis of Estimate" codes. The "monitoring" basis of estimate code has been replaced with codes for "continuous monitoring", M1, and "periodic or random monitoring", M2. The "emissions factor" basis of estimate code has been replaced with codes for "published emissions factors", E1, and "site-specific emissions factors", E2.

Also, for reporting year 2007, EPA has added codes detailing the reasons for revisions to the Forms R and A. The codes and their meanings are shown here.

Slide 138
**TRI Program Changes
for RY 2007 (continued)**
Duration: 00:00:30

- Additional codes detailing reasons for withdrawals of Forms R and A
 - Did not meet reporting threshold for manufacturing, processing, or otherwise use (WT1)
 - Did not meet reporting threshold for number of employees (WT2)
 - Not in a covered NAICS code (WT3)
 - Other reasons (WO1)
- Additional public contact information (Forms R and A)
 - Added email address to public contact field on Form R.
 - Added public contact field to Form A (name, phone, and email address).

Notes:

Similarly, for reporting year 2007, EPA has also added codes detailing the reasons for withdrawals of Forms R and A. The new codes are show here.

Finally, the TRI program has added additional public contact information to the forms. An email address for the public contact has been added to the Form R, and the public contact name, phone and email, has been added to the Form A.

Slide 139
**Other Recent and
Upcoming Program
Changes**
Duration: 00:01:09

- North American Industry Classification System (NAICS) Codes for RY 2006 (40 C.F.R. §372.23)
 - Facilities are required to report NAICS codes in place of Standard Industry Classification (SIC) Codes beginning with RY 2006.
- Final Rule Expanding Form A Eligibility Effective for RY2006 (See 40 C.F.R. §372.27)
 - Expands eligibility for the use of Form A for both PBT and Non-PBT chemicals.
- Dioxin and Dioxin Like Compounds Toxicity Equivalency (TEQ) Information Rule for RY2008 (See 40 C.F.R. §372.85(b)(ii))
 - In addition to the total grams released for the entire category, facilities must report the quantity of each of the 17 compounds in the chemical category on a new Form R Schedule 1.
 - Data will be used to calculate TEQ values that will be made available to the public along with the mass data.
 - Removes the requirement to report the % distribution of each of the compounds in the category.

Notes:

Next we're going to talk about some of the other recent and upcoming program changes. As discussed earlier, for reporting year 2006, the TRI program switched from SIC codes to NAICS codes. So, beginning last year, facilities must report their NAICS codes in place of SIC codes. Also, in reporting year 2006, Form A eligibility was expanded so that now the Form A can be used for PBT and non-PBT chemicals if they meet the various requirements.

For reporting year 2008, there will be changes related to the reporting of dioxin and dioxin-like compounds. In addition to reporting on the grams of the chemical category managed as waste, facilities must report the quantity of each of the 17 compounds in the category on a new Form R Schedule 1. These data will be used to calculate toxicity equivalency values, which will be made available to the public along with the actual weights.

Slide 140
Chemical List Changes
Duration: 00:00:36

TRI REPORTING REQUIREMENTS

Chemical List Changes

Pending Changes

- Diisononyl Phthalate category addition
 - Proposal, comment period closed October 12, 2005
- Delistings under consideration
 - MIBK
 - Acetonitrile
 - Chromium Compounds

Notes:

The TRI chemical list includes over 600 chemicals and chemical categories. Periodically, there are changes to the list, so it's important to check for updates every year. There are no new chemical list changes specific to reporting year 2007. As for other pending changes – there is a chemical category addition under consideration. And petitions have been submitted for EPA to consider several other delistings. None of these are final at this point. They're just under consideration.

Slide 141
Section X: TRI Program Information
Duration: 00:00:05

EPA TRI

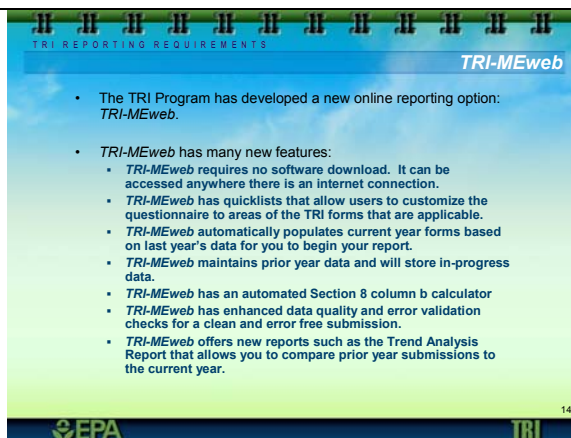
Section X:
TRI Program Information

Notes:

Slide 142

TRI Program Information

Duration: 00:01:03



TRI REPORTING REQUIREMENTS

TRI-MEweb

- The TRI Program has developed a new online reporting option: *TRI-MEweb*.
- *TRI-MEweb* has many new features:
 - *TRI-MEweb* requires no software download. It can be accessed anywhere there is an internet connection.
 - *TRI-MEweb* has quicklists that allow users to customize the questionnaire to areas of the TRI forms that are applicable.
 - *TRI-MEweb* automatically populates current year forms based on last year's data for you to begin your report.
 - *TRI-MEweb* maintains prior year data and will store in-progress data.
 - *TRI-MEweb* has an automated Section 8 column b calculator
 - *TRI-MEweb* has enhanced data quality and error validation checks for a clean and error free submission.
 - *TRI-MEweb* offers new reports such as the Trend Analysis Report that allows you to compare prior year submissions to the current year.

EPA TRI 142

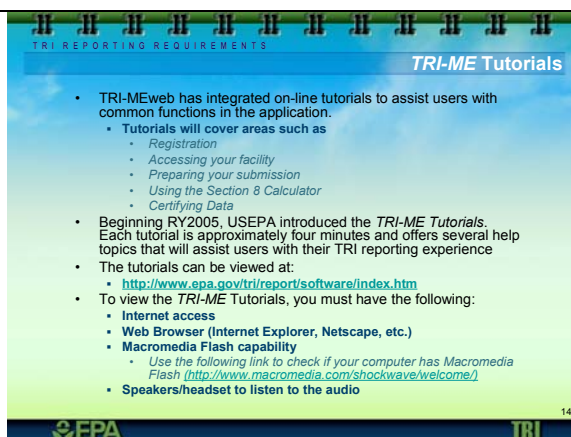
Notes:

TRI Program is developing a new online reporting option called TRI-MEweb. This is in addition to TRI-ME desktop software that many TRI covered facilities are familiar with and which is still available for download from the TRI website. TRI-MEweb is a web application that will have much the same functionality of the TRI-ME software and a number of new features. It will automatically populate current year forms, based on your last year's data, so you can start out with that information. It has enhanced data quality and error validation checks that will help to make sure you submit a clean and error-free report. And it has a few tools that you can use such as a Trends Analysis Report that allows you to compare your prior year submissions to the current year form. TRI-MEweb and regular TRI-ME software are both available from the TRI Website.

Slide 143

TRI-ME Tutorials

Duration: 00:01:02



TRI REPORTING REQUIREMENTS

TRI-ME Tutorials

- TRI-MEweb has integrated on-line tutorials to assist users with common functions in the application.
 - Tutorials will cover areas such as
 - Registration
 - Accessing your facility
 - Preparing your submission
 - Using the Section 8 Calculator
 - Certifying Data
- Beginning RY2005, USEPA introduced the *TRI-ME Tutorials*. Each tutorial is approximately four minutes and offers several help topics that will assist users with their TRI reporting experience
- The tutorials can be viewed at:
 - <http://www.epa.gov/tri/report/software/index.htm>
- To view the *TRI-ME Tutorials*, you must have the following:
 - Internet access
 - Web Browser (Internet Explorer, Netscape, etc.)
 - Macromedia Flash capability
 - Use the following link to check if your computer has Macromedia Flash (<http://www.macromedia.com/shockwave/welcome/>)
 - Speakers/headset to listen to the audio

EPA TRI 143

Notes:

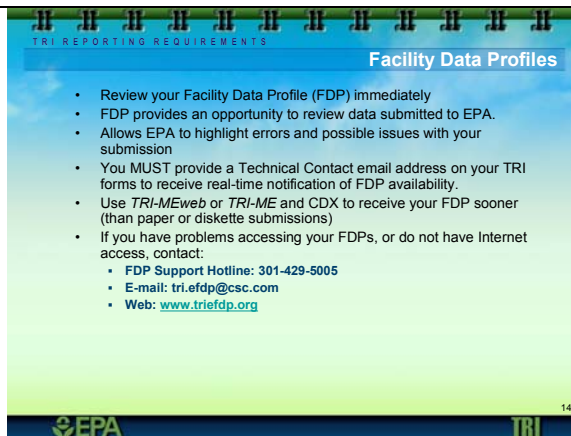
There are other tools available to assist you with your TRI reporting and using the TRI Made Easy software. Beginning this year, EPA has developed on-line tutorials to assist users with the new TRI-ME web application. The tutorials cover all of the steps needed to access, submit, and certify TRI forms using TRI-ME web.

Beginning in reporting year 2005, EPA is providing TRI-ME tutorials. The tutorials walk you through the TRI reporting process using the TRI-ME desktop software. They are available from the EPA Website. In order to use them, you must have Internet access and a web browser and Macromedia Flash capability which you can also download from the Website shown here. There is audio along with the tutorials, so you would also need to have speakers or a headset.

Slide 144

Facility Data Profiles

Duration: 00:01:45



- Review your Facility Data Profile (FDP) immediately
- FDP provides an opportunity to review data submitted to EPA.
- Allows EPA to highlight errors and possible issues with your submission
- You MUST provide a Technical Contact email address on your TRI forms to receive real-time notification of FDP availability.
- Use *TRI-MEweb* or *TRI-ME* and CDX to receive your FDP sooner (than paper or diskette submissions)
- If you have problems accessing your FDPs, or do not have Internet access, contact:
 - FDP Support Hotline: 301-429-5005
 - E-mail: tri.efdp@csc.com
 - Web: www.triefdp.org

Notes:

Facilities that have filed in the past should be familiar with the Facility Data Profiles. This Profile is generated after the data processing center for TRI receives facilities' forms. After they enter the information into a database, they run various data validation steps, and then they produce a facility data profile.

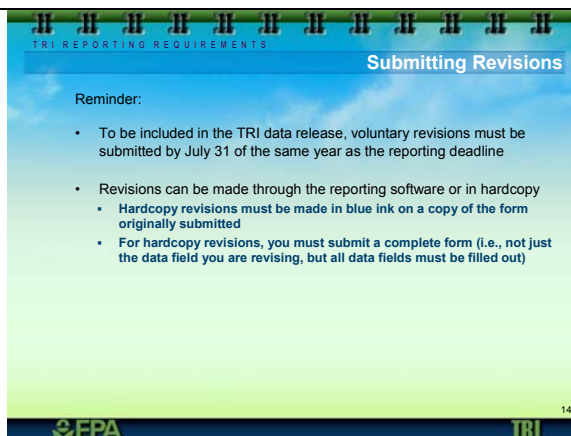
The Facility Data Profile has two purposes: First, it's also called an "echo back" because it echoes back to you the information that the data processing center entered. That gives facilities a chance to confirm that the data were entered correctly. Second, it identifies potential errors. Potential errors include: 1) non-technical errors, such as transposing a CAS number; or 2) technical errors, such as an invalid NAICS code; or 3) a significant error, which would be missing information like a chemical identifier, or the certifying signature. Facilities have 21 days to respond to significant errors pointed out in the Facility Data Profile.

Facilities can help ensure speedy receipt of their Facility Data Profiles by providing a technical contact email address on their TRI Forms and by filing electronically using the TRI-ME web or TRI-ME desktop applications. Facilities can use the telephone number, email address, and website shown here if they have any problems receiving or accessing their facility data profiles.

Slide 145

Submitting Revisions

Duration: 00:00:44



Reminder:

- To be included in the TRI data release, voluntary revisions must be submitted by July 31 of the same year as the reporting deadline
- Revisions can be made through the reporting software or in hardcopy
 - Hardcopy revisions must be made in blue ink on a copy of the form originally submitted
 - For hardcopy revisions, you must submit a complete form (i.e., not just the data field you are revising, but all data fields must be filled out)

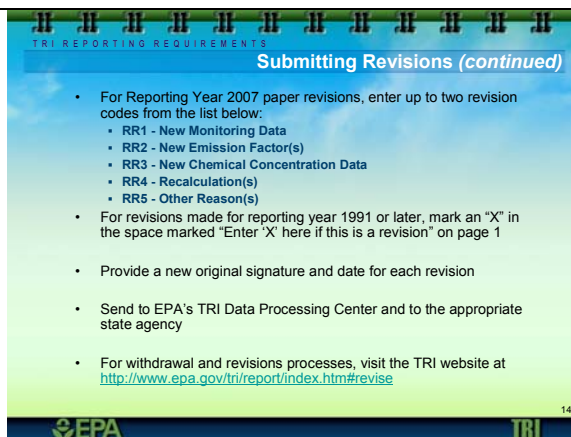
Notes:

Here are some reminders related to submitting TRI revisions. If, at any time, a facility finds there has been a reporting error, they can submit a revision. If it is a recent error, it can be corrected before the public release of the TRI data for that year if it is submitted by July 31st of the same year that the original report was submitted. If the revision is submitted after that, the revision will still go through; however, it would likely show up in subsequent data releases. Revisions can be made through the TRI-ME desktop and TRI-ME web applications, or in hardcopy, with the TRI-ME software being the preferred method.

Slide 146

Submitting Revisions (continued)

Duration: 00:00:45



- For Reporting Year 2007 paper revisions, enter up to two revision codes from the list below:
 - RR1 - New Monitoring Data
 - RR2 - New Emission Factor(s)
 - RR3 - New Chemical Concentration Data
 - RR4 - Recalculation(s)
 - RR5 - Other Reason(s)
- For revisions made for reporting year 1991 or later, mark an "X" in the space marked "Enter X" here if this is a revision" on page 1
- Provide a new original signature and date for each revision
- Send to EPA's TRI Data Processing Center and to the appropriate state agency
- For withdrawal and revisions processes, visit the TRI website at <http://www.epa.gov/tri/report/index.htm#revise>

Notes:

To make a revision, you must submit a new complete form, not just the data field you are revising. For paper submittals, prior to reporting year 2007, there is a check box to indicate that this is a revision that is being submitted. For 2007, facilities will enter up to two of the revisions codes shown here indicating the reason for the revision.

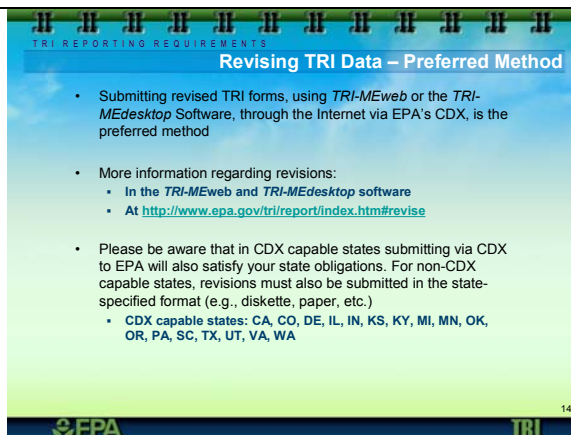
Facilities need to re-certify each revision submission and they need to be submitted to EPA's Data Processing Center and to the appropriate state agency.

Additional information on revisions, and also on withdrawing data, are available on the TRI website.

Slide 147

Revising TRI Data – Preferred Method

Duration: 00:00:32



- Submitting revised TRI forms, using TRI-MEweb or the TRI-MEdesktop Software, through the Internet via EPA's CDX, is the preferred method
- More information regarding revisions:
 - In the TRI-MEweb and TRI-MEdesktop software
 - At <http://www.epa.gov/tri/report/index.htm#revise>
- Please be aware that in CDX capable states submitting via CDX to EPA will also satisfy your state obligations. For non-CDX capable states, revisions must also be submitted in the state-specified format (e.g., diskette, paper, etc.)
 - CDX capable states: CA, CO, DE, IL, IN, KS, KY, MI, MN, OK, OR, PA, SC, TX, UT, VA, WA

Notes:

The preferred method for submitting revisions is electronically using the TRI-ME software through the Internet via EPA's central data exchange. Be aware that when submitting via the central data exchange to EPA, it will satisfy your state obligations only for states that are CDX-capable shown here. For states that are not yet CDX-capable, facilities must remember to also submit the revision to the state, such as on a diskette or hardcopy.

Slide 148

Form R Submissions/Revisions

Duration: 00:00:53

TRI REPORTING REQUIREMENTS

Form R Submissions/Revisions

Reminder:

- Form R submitted to replace previously filed Form A Certification Statement
 - Considered to be a late submission of a Form R and a request for a withdrawal of the previously filed Form A Certification Statement
 - Do not check the revision box!
 - Note that submitting a Form A when a Form R is required is considered a less severe violation than failing to submit either form (cfpub.epa.gov/compliance/resources/policies/civil/epcra/index.cfm).
- For a change in the chemical reported (including a metal to a metal compound) you must withdraw the original submission and re-submit for the new chemical. This is not a revision.

EPA TRI 148

Notes:

Here are a few more reminders regarding revisions and withdrawals. If submitting a Form R to replace a previously filed Form A, this is not considered a revision (do not check the revision box). It is considered a late submission of Form R. You would also need to request that the Form A be withdrawn.

Note that submitting a Form A when a Form R is required is considered a less severe violation than failing to submit either form, but it is considered a late submission.

A common revision is to change the chemical reported from a metal to a metal compound or vice versa. In that case the original submission must be withdrawn and the form for the new chemical should be submitted. This is not considered a revision.

Slide 149

Submitting Withdrawals

Duration: 00:00:51

TRI REPORTING REQUIREMENTS

Submitting Withdrawals

- Withdrawals can be made through the reporting software or in hardcopy
 - Reporting Year 2007 forward: You may submit a photocopy of your original submission (from your file). Using blue ink, re-sign and re-date the certification statement on Page 1 and enter the appropriate withdrawal code(s) in the space provided on page 1 of the form.
 - Reporting Year 2006 and prior years: Please submit a photocopy of the form you wish to withdraw (from your file), and attach – as a cover page – page 1 of the current year's reporting form, which includes a field for the withdrawal codes. Using blue ink, please sign and date the certification statement and enter the appropriate withdrawal code(s) in the space provided on page 1 of the current year's form.
- EPA may audit withdrawals at anytime.

EPA TRI 149

Notes:

Facilities can also withdraw TRI submittals if they learn that they were submitted in error. As with revisions, withdrawals can be made in hardcopy or via the TRI-ME software. If using paper, beginning in reporting year 2007, facilities must enter the appropriate withdrawal codes in the space provided on a copy of their original submission.

For withdrawals of data submitted for years prior to 2007, facilities must submit a copy of the original submission as well as a cover page consisting of page one of the current years reporting form, which includes the appropriate withdrawal codes in the space provided.

In both cases, the re-submission must be re-signed and certified.

Slide 150

Withdrawing TRI Data – Preferred Method

Duration: 00:00:34

Withdrawing TRI Data – Preferred Method

- Submitting a withdrawal TRI form, using *TRI-MEweb*, through the Internet via EPA's CDX, is the preferred method for reporting years 2005-2007.
- Submitting a withdrawal TRI form, using *TRI-ME* Software, through the Internet via EPA's CDX, is available in the RY2007 version of the software.
 - Withdrawals may also be made in via diskette from the RY2007 version
- More information regarding withdrawals:
 - In the *TRI-MEweb* and *TRI-MEdesktop* software
 - At <http://www.epa.gov/tri/report/index.htm#revise>
- Please be aware that in CDX capable states submitting via CDX to EPA will also satisfy your state obligations. For non-CDX capable states, withdrawals must also be submitted in the state-specified format (e.g., diskette, paper, etc.)
 - CDX capable states: CA, CO, DE, IL, IN, KS, KY, MI, MN, OK, OR, PA, SC, TX, UT, VA, WA

Notes:

As with submitting revisions, the preferred method for withdrawals is electronically via the central data exchange using the TRI-ME desktop or TRI-ME web software. Information on how to properly submit TRI data withdrawal requests can be obtained from the TRI-ME software applications or from the website shown here. As with revisions, submitting via the central data exchange will only fulfill state obligations for those states shown here that are CDX capable.

Slide 151

EPA Self-Disclosure Audit Policy

Duration: 00:00:39

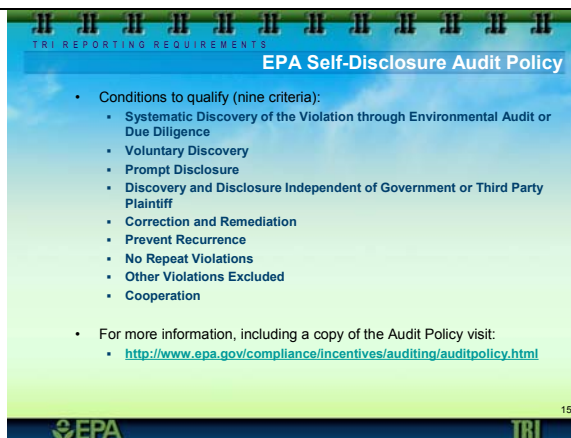
EPA Self-Disclosure Audit Policy

- Audit Policy enhances environmental protection through incentives for companies to self-police, disclose and correct violations
- Facilities that meet all 9 conditions of the Audit Policy shall have 100% of the gravity based penalty waived. However, EPA reserves the option to collect any significant economic benefit which may have been realized by the facility.
- Since implemented in 1995, over 4,000 entities have self-disclosed violations at over 11,300 facilities under the policy

Notes:

Facilities should be aware that EPA's Audit Policy is available to those facilities that may not been reporting or reporting incorrectly in the past. The Audit Policy provides incentives for companies to do their own self-policing and disclose and correct violations. Companies that satisfy the policy's criteria could be eligible for up to 100% reduction in the otherwise applicable penalties. The Audit Policy has been used by many facilities and companies over the years and many times for the purposes of TRI's reporting requirements.

Slide 152
**EPA Self-Disclosure
Audit Policy**
Duration: 00:00:60



TRI REPORTING REQUIREMENTS

EPA Self-Disclosure Audit Policy

- Conditions to qualify (nine criteria):
 - Systematic Discovery of the Violation through Environmental Audit or Due Diligence
 - Voluntary Discovery
 - Prompt Disclosure
 - Discovery and Disclosure Independent of Government or Third Party Plaintiff
 - Correction and Remediation
 - Prevent Recurrence
 - No Repeat Violations
 - Other Violations Excluded
 - Cooperation
- For more information, including a copy of the Audit Policy visit:
 - <http://www.epa.gov/compliance/incentives/auditing/auditpolicy.html>

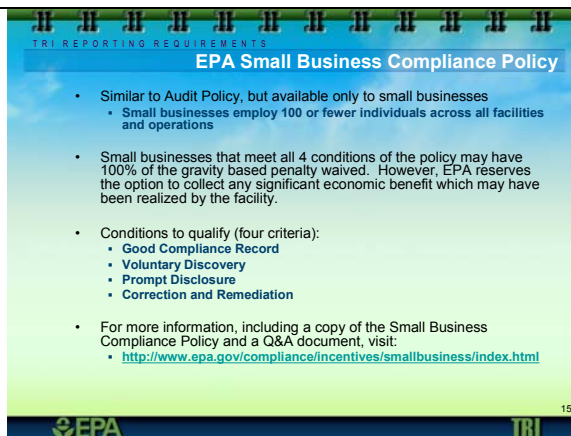
EPA TRI 152

Notes:

Conditions to qualify for the Audit Policy are as follows. The violation had to be from a systematic discovery through an environmental audit or due diligence. It has to have been a voluntary discovery made by the facility. The facility must promptly disclose the violation to the Environmental Protection Agency and the discovery disclosure must be independent of a government or third party plaintiff.

The facility must fix the problem to prevent it from recurring and this audit policy cannot be used to repeatedly for the same violations. It only covers the violations for which you are reporting. If other violations are identified over the course of using the audit policy, they may not be covered. You have to cooperate fully with the EPA and other authorities. More details on the audit policy are available from the EPA Website at the address shown here.

Slide 153
**EPA Small Business
Compliance Policy**
Duration: 00:00:47



TRI REPORTING REQUIREMENTS

EPA Small Business Compliance Policy

- Similar to Audit Policy, but available only to small businesses
 - Small businesses employ 100 or fewer individuals across all facilities and operations
- Small businesses that meet all 4 conditions of the policy may have 100% of the gravity based penalty waived. However, EPA reserves the option to collect any significant economic benefit which may have been realized by the facility.
- Conditions to qualify (four criteria):
 - Good Compliance Record
 - Voluntary Discovery
 - Prompt Disclosure
 - Correction and Remediation
- For more information, including a copy of the Small Business Compliance Policy and a Q&A document, visit:
 - <http://www.epa.gov/compliance/incentives/smallbusiness/index.html>

EPA TRI 153

Notes:

EPA also has another option available to small businesses that self disclose violations. The Small Business Compliance Policy is similar to the Audit Policy, but it has fewer conditions and is only available to business with 100 or fewer employees. If a small business meets the conditions, they may be eligible for 100 percent reduction in the gravity based penalty. The conditions to qualify are: a good compliance record, voluntary discovery of the violation, prompt disclosure, and correction and remediation of the violation. More information on the Small Business Compliance Policy can be found at the website shown here.

Slide 154
EPCRA Section 313 Enforcement

Duration: 00:00:25

EPCRA Section 313 Enforcement

- Companies violating any statutory or regulatory requirement are subject to penalties of up to \$32,500 per day per violation
- Companies subject to citizen suits and could also be liable for attorney fees and litigation costs (EPCRA §326(f))
- Government's penalty is determined by applying the Enforcement Response Policy (ERP) to each violation
 - For EPA's EPCRA enforcement policies, visit: <http://cfpub.epa.gov/compliance/resources/policies/civil/epcra/index.cfm>

Notes:

Companies violating any statutory or regulatory requirement are subject to penalties of up to \$32,500 per day per violation. The government's Enforcement Response Policy is what is used to determine what the penalty will be. More information on EPA EPCRA enforcement policies can be found at the website shown here.

Slide 155
Section XI: Tools and Assistance

Duration: 00:00:05

Section XI: Tools and Assistance

Notes:

Slide 156
Tools and Assistance


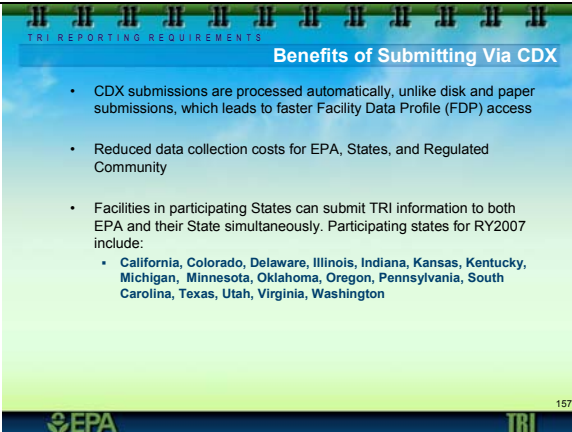

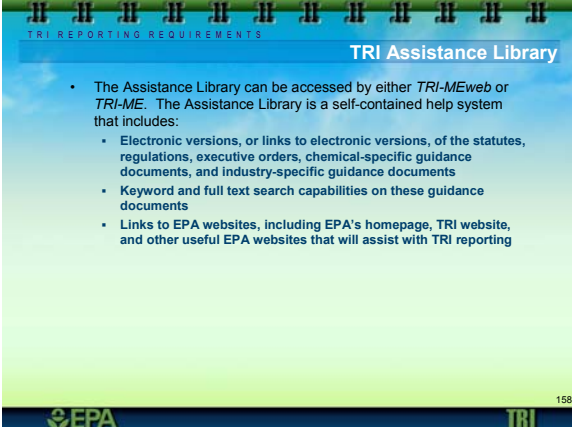

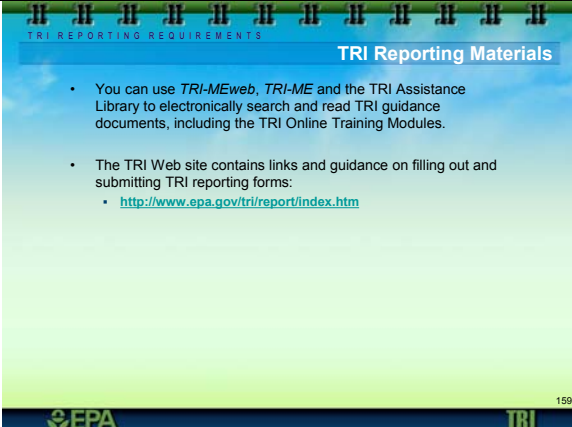
Duration: 00:00:53


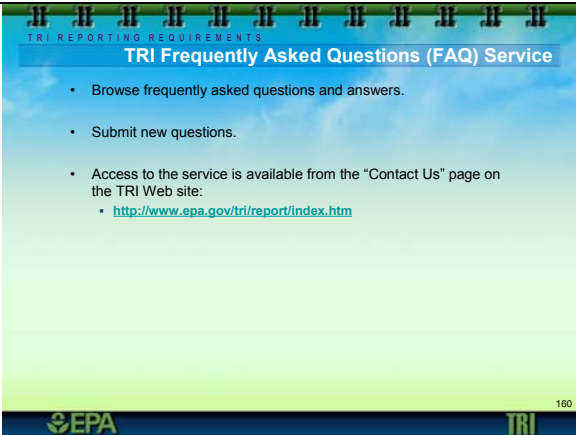

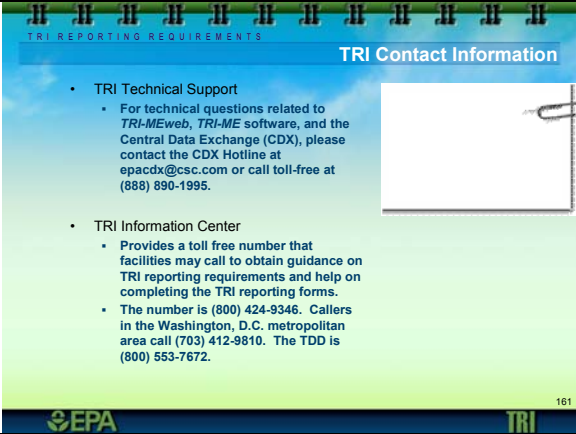

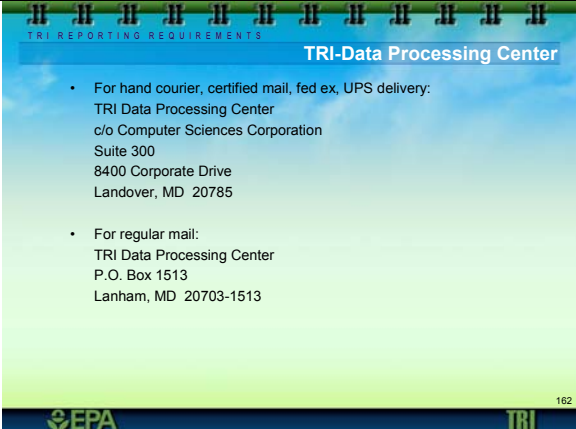
Benefits of TRI-ME and TRI-MEweb and Submitting Via CDX

- It saves time and money
- Using TRI-MEweb and TRI-ME significantly reduces reporting errors
- TRI-MEweb and TRI-ME have integrated TRI Assistance Library
- EPA provides instant email confirmation of submission
- Electronic Signature allows for quick, paperless submissions

Notes:

EPA would like to encourage the use of TRI-ME desktop and TRI-ME web reporting applications and the submittal of TRI reports via EPA's Central Data Exchange. It saves time and money for the reporting facilities and for the EPA. Both TRI-ME desktop and TRI-ME web have the TRI assistance library integrated within the software so that facilities have ready access to information and guidance. Using the TRI-ME software has been proven to significantly reduce reporting errors. When submitting via the CDX, facilities receive instant e-mail confirmation that EPA has received their submission. And submitting via the CDX uses an electronic signature that will allow for paperless submission.

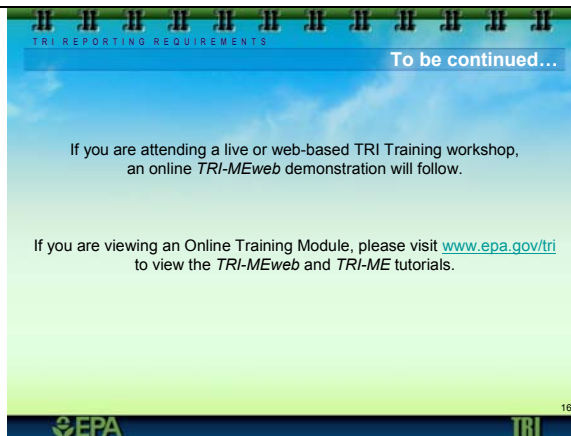
<p>Slide 157 </p> <p>Benefits of Submitting Via CDX</p> <p>Duration: 00:00:32</p>		<p>Notes:</p> <p>Submissions via the CDX are processed automatically, unlike the disk and paper submission, which means you receive your facility data profile much faster. Again, it reduces the cost of data collections for EPA, the state, as well as facilities and companies that need to report to TRI. For facilities in those states that are CDX capable, a submittal of their TRI forms to EPA automatically fulfills their state obligations.</p>
<p>Slide 158 </p> <p>TRI Assistance Library</p> <p>Duration: 00:00:40</p>		<p>Notes:</p> <p>TRI reporters should also be aware of the usefulness of TRI Assistance Library. The Assistance Library is contained within the TRI Made Easy software and can be downloaded from the TRI website. The self-contained help system includes electronic versions or electronic links to the electronic version of all the statutes, regulations, and guidance documents available through the TRI program's Website. Because it is all electronic, it offers full-text keyword searching and links to the TRI home page and other useful EPA websites.</p>
<p>Slide 159 </p> <p>TRI Reporting Materials</p> <p>Duration: 00:00:19</p>		<p>Notes:</p> <p>The TRI Assistance Library, as accessed through the TRI-ME web and TRI-ME desktop applications provides access to the TRI guidance documents and the on-line tutorials and training modules. This information can also be accessed through the TRI website shown here.</p>

<p>Slide 160 </p> <p>TRI Frequently Asked Questions (FAQ) Service</p> <p>Duration: 00:00:21</p>		<p>Notes:</p> <p>Recently, the TRI Program has developed a Frequently Asked Questions Service. In addition to allowing facilities to browse past questions and answers, it also allows users to submit new questions and receive timely answers. This service new service can be accessed at the website shown here.</p>
<p>Slide 161 </p> <p>TRI Contact Information</p> <p>Duration: 00:00:20</p>		<p>Notes:</p> <p>If you want more information about TRI-ME web, TRI-ME desktop, and the central data exchange, please use the CDX hotline and email address shown here. For information on TRI in general, facilities can call the TRI information center at the numbers shown here.</p>
<p>Slide 162 </p> <p>TRI-Data Processing Center</p> <p>Duration: 00:00:19</p>		<p>Notes:</p> <p>If you need to send something by courier or certified mail, or by FedEx or UPS to the TRI Data Processing Center, use the address shown here. If you're sending something via regular mail to the TRI Data Processing Center, send it to the post office box shown here.</p>

Slide 163

To be continued...

Duration: 00:00:53



Notes:

This concludes the Basic Concepts Module of the TRI Online Training.

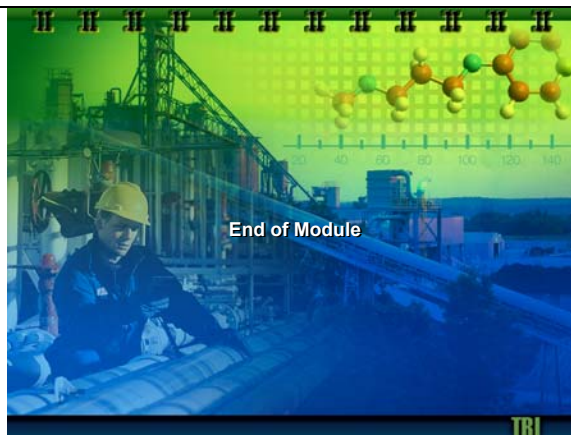
On-line tutorials for using the TRI-ME web and TRI-ME desktop applications can be accessed from the TRI homepage at www.epa.gov/tri.

Also, the Advanced Concepts module of this Online Training course is also available from the TRI homepage. The Advanced Concepts module assumes a basic understanding of the TRI program requirements. It reviews some of the basic concepts and also focuses on key concepts that will help to ensure accurate TRI reporting, including guidance on reporting exemptions, threshold determinations, chemicals with special requirements, and more on the recent changes to the TRI program.

Slide 164

End of Module

Duration: 00:00:05



Notes: